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## Worldwide Report

# TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT

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30 APRIL 1987

# WORLDWIDE REPORT

## TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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## OFFICIAL REPORTS TELEVISION POLICY UNDER REVIEW

Hong Kong SOUTH CHINA MORNING POST in English 21 Feb 87 p 1

[Article by Peter Robinson]

[Text]

THE Government is completely rethinking its telecommunications policy, which could lead to a break-up of Hongkong Telephone's monopoly in providing telecommunications networks.

The review is also likely to put back the granting of cable television licences until next year.

The Government originally envisaged that companies interested in applying for cable television would tender in May and it would allocate licences by the end of the year.

However, the Secretary for Economic Services, Mr John Yaxley, told the *South China Morning Post* yesterday: "A number of aspects of telecommunications policy need to be reviewed before we begin to put cable television out to tender."

"Other countries have introduced deregulation in telecommunications and we have had a degree of liberalisation here. The question now is should there be further liberalisation."

"The implication of in-

troducing another service like cable television is causing us to have a complete rethink on telecommunications policy. We will not be ready for some time."

He said there was no possibility of cable television tenders being invited by May.

In the early 1980s, the Government introduced a measure of liberalisation, allowing other companies to offer telephones and other equipment on Hongkong Telephone's network.

But it drew the line at allowing other companies to provide their own phone networks.

Cable television, which would operate on a new wide band network, has raised the question of whether competing telecommunications networks should be allowed.

Hongkong Telephone, which has the monopoly in running the local telecommunications network, was the first interested party in cable television. It set up a consortium, Cable Television Hongkong (CTHK).

Other parties have expressed interest, including Hutchison CableVision whose principal shareholders

are Hutchison Whampoa and British Telecom.

Hutchison CableVision wants to provide both the network for cable television and the programs, rather than operating programs over Hongkong Telephone's network.

This raised the crucial issue of whether Hongkong Telephone's monopoly should be broken.

In an interview in the UK with the *South China Morning Post*, the head of British Telecom's overseas division, Mr John King, claimed that Hongkong was ill-served by a monopoly and was losing out, especially in the area of specialised business telecommunications networks, which Hongkong Telephone has vigorously denied.

Yesterday, when told of the delay, Mr Edwin Kong, chief executive of the Hongkong Telephone cable television consortium CTHK, said: "I am very disappointed. The Government should put aside the broader telecommunications issues and look at cable television. It should separate the two things."

Hutchison CableVision's reaction was different since it

wants the Government to address the deregulation issue and grant it a licence to operate its own network.

Its general manager, Mr Melvyn Sears said: "It gives us a little more time to prepare our proposal, though we would all like to get on with it as soon as possible."

The wide band network for cable television would open the way for a range of other services such as home banking, shopping and security, which both Hongkong Telephone and Hutchison CableVision are interested in providing.

The companies have been waging a war of words over which was best equipped to provide the wide band network. Hongkong Telephone says it was in the best position since it already had the underground cable ducts and could use many of them without having to dig up roads.

Hutchison claimed that Hongkong Telephone would have to lay many new ducts, and last week demonstrated a new machine which could dig narrow ducts and lay cable at a fraction of the time of conventional methods.

## PM, POLITICIANS OBTAIN WIRE SERVICE PREVIEW

Auckland THE NEW ZEALAND HERALD in English 17 Mar 87 p 3

[Text]

The Prime Minister, Mr Lange, has acquired the right to preview much of the contents of the country's newspapers, through an agreement between the Department of Internal Affairs and the New Zealand Press Association.

Mr Lange and his staff have gained access to the NZPA computer system, by which domestic and international news is transmitted to morning and afternoon newspapers for publication.

The NZPA system will progressively be made available to other ministers, the Leader of the Opposition, Mr Bolger, and all members of Parliament as part of an \$8 million project to computerise parliamentary communications.

However, the NZPA — a co-operative news agency owned jointly by the country's newspapers — has placed strict conditions on the service offered to politicians.

The general manager of NZPA, Mr Graeme Jenkins, said yesterday that MPs would be unable, for instance, to insert their own material into the system.

MPs would be prohibited under the terms of the contract from passing NZPA material to competing news services, such as radio and television.

The NZPA management would also resist strongly any attempt by politicians to change news items which had been transmitted but not yet published in newspapers.

"Any attempt to influence NZPA, whether at head office

or in the parliamentary press gallery, would be in breach of the contract and we would have the right to terminate the agreement," said Mr Jenkins.

He said he would also be concerned if the service was to be available only to the Prime Minister.

"It is our understanding that it is to be available to all MPs," he said.

The decision to offer the service to politicians had been made unanimously by the NZPA board of directors, said Mr Jenkins, on "a purely commercial basis."

"If we did not sell them this type of service, someone else would."

Mr Jenkins would not disclose the value of the one-year contract, although it is under-

stood to be about \$160,000.

The Prime Minister's press officer, Mr Ross Vintiner, said there was no chance that Mr Lange or his assistants would attempt to interfere in the NZPA system.

"It is not a checking system, from our point of view, but an information service," he said.

The system, which carries material transmitted by the major international news agencies, would be useful in providing information which would forewarn Mr Lange of items to be published in the newspapers concerning New Zealand's foreign affairs.

Locally, it had already proved valuable in bringing up-to-the-minute information on the Bay of Plenty earthquake into the Prime Minister's office.

The Deputy Secretary of Internal Affairs, Mr John O'Sullivan, said the NZPA service would be available to ministers and selected offices throughout Parliament on completion of the first stage of the computerisation projection about the end of June.

The Leader of the Opposition, Mr Bolger, and party whips would have access to the system from a computer network operating throughout Parliament Buildings.

Mr O'Sullivan said a short-list of tenders from computer suppliers was now being considered, and the equipment to be selected would incorporate "gateways," ensuring that sensitive information available to ministers would not be accessible through terminals outside the Beehive.

It was expected that all MPs would have access to the computer network under stage two of the project, due to be completed during the present financial year.

A parliamentary database was likely to be set up under the third and final stage, carrying Hansard reports on parliamentary proceedings and "copies" of parliamentary bills.

Mr O'Sullivan said the network would have an internal "electronic mail" facility and offer all MPs the benefits of modern electronic technology.

He added that "sensible precautions" had been taken to ensure that unauthorised computer hackers could not gain access to any part of the network.

## THAILAND

### SATELLITE DEVELOPMENT PROJECT GETS BOOST

Bangkok NAE0 NA in Thai 30 Sep 86 pp 5, 11

[Unattributed report: "Minister Michai Pulls Another Suprpise, Will Bring Up Satellite Project Costing 26 Billion at Today's Cabinet Meeting"]

[Text] Minister Michai will bring up the satellite project of the Siam Satellite group at today's cabinet meeting. This has dismayed the entire cabinet. The project proposes to give many things to the government, including investing 26.1 billion baht without the government having to bear any financial responsibility. One hundred million will be donated to the Thai Saichai Foundation, and six government units will be allowed free use of six satellite channels. However, it is not clear what the government must do in return.

A high-level news source in the cabinet told NAE0 NA that Mr Michai Ruchuphan, the minister attached to the Office of the Prime Minister, will bring up the satellite project at today's (30 September) cabinet meeting. This is a project of the Siam Satellite Telecommunications Company/Kim-Wall and Associates, Ink/P.R.V. Construction.

The news source said that the Siam Satellite Company has requested permission to invest in building a satellite project. About \$1 billion, or approximately 26.1 billion baht, will be invested in the project. This includes the cost of the satellite, the cost of transporting the satellite, and the cost of constructing a control station and a ground station.

The Siam Satellite Company will invest the full amount itself. The government will not have to share any of the financial responsibility. After the project has been completed, the assets will all be transferred to the government.

The proposed satellite is a 24-channel satellite. It will be purchased from the American RCA Company. This is a dual-band satellite. It will be named the "Siam Sat."

The Siam Satellite Company has proposed donating 100 million baht to the Thai Saichai Foundation within 30 days after receiving government approval to invest in this satellite project.

Besides this, it has said that six government units will be allowed to use six satellite channels free of charge. The six units are the Bureau of the Royal Household, the Office of the Prime Minister, the Ministry of Defense, the Ministry of Communications, the Ministry of Interior, and the Ministry of Education.

The news source said that the project proposed by the Siam Satellite Company is called the "Satellite Project to Celebrate the King's Birthday" in honor of the king's 60th birthday on 5 December 1987.

"This project is very strange. They have proposed giving things to the government, but they have not made it clear what they expect in return. Also, no commercial feasibility studies have been made. Nothing seems settled," said the news source.

The news source also said that the Siam Satellite Company has proposed only one thing: "We request exclusive rights to satellite project operations while the satellite system is in operation. The agreement can be revised every 15 years with the approval of both the Thai government and the company."

"Initial data show that in Thailand today, there is a need for a maximum of 8-10 satellite channels. Their proposal to allow government units to use six channels free leaves only two-four channels from which the investors can make a profit. This would not be worth the cost unless the investors obtain a monopoly over domestic telecommunications activities. If they do obtain a monopoly, it may be worth the cost," said the news source.

NAEO NA has also learned that the Siam Satellite Company first proposed a satellite project during the period of the Prem 4 administration. But it was not approved.

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## THAILAND

### SATELLITE GROUND STATION, MILITARY R&D DISCUSSED

Bangkok MATICHON in Thai 7 Sep 86 p 5

[Residence 110 column: "Satellite Ground Station to Combat Guided Radar, Thailand's Will Cost Only 50,000 As Compared With 10 Million for That Produced Abroad"]

[Text] On a previous occasion, I discussed the results achieved by instructors and students at the King Mongkut's Institute of Technology, Latkrabang Campus, in devising surgical tools that use laser beams. Now, this institute is engaged in another interesting study.

"Satellite Ground Station" was a front-page story last week. This is a research project that is being carried on by the telecommunications sector. The four instructors who are involved in the project are Monai Krairuk, Somphon Kosanwat, Wiwat Kiranon, and Thongthot Wanitsi. The project was recently approved and given a grant of 50,000 baht by the Research Council.

Professor Thongthot, the person responsible for this research project, began the conversation by talking about radio waves, which has a direct bearing on this. He said that communications using telephones, radio transceivers, televisions, mobile telephones, and so on are make use of radio waves.

Radio waves are composed of magnetic and electric field forces originating from oscillating electrical forces. They are transmitted through the air. The frequency of radio waves are measured in Hertz.

Based on an international agreement on radio-communications activities, frequencies are divided as follows:

- Very low frequency, or VLF: 10-30 kHz.
- Low frequency, or LF: 30-300 kHz.
- Medium frequency, or MF: 300-3,000 kHz (3 MHz).
- High frequency, or HF: 3-30 MHz.
- Very high frequency, or VHF: 30-300 MHz.
- Ultra high frequency, or UHF: 300-3,000 MHz (3 GHz).
- Microwave: above 3 GHz.



Each of these frequencies is used for different purposes, as people probably know from listening to the AM and FM radio stations and television stations. The very low frequency to high frequency ranges are used for general transmissions. But there are few channels for broadcasting news.

In the VHF, UHF, and microwave ranges, there are many more channels for broadcasting news, and news can be broadcast as desired. This will benefit communications in the future. However, a weakness of these ranges is that the waves must be transmitted in a straight line. This is clear from long-distance television transmission. Today, Thailand uses a microwave system, which requires that the waves be passed along by a series of relay stations. These relay stations, which have signal reception dishes and high antennas, can be seen everywhere.

As just mentioned, using ground transmission, it is necessary to use a series of relay stations. But in many cases, the results are not good. And this is very expensive. Because of this, studies have been done to find other transmission methods. The signals are transmitted to a satellite above the earth. The signals bounce off the satellite back to earth. This produces better results, because the signals can be reflected to any point desired.

"In the past, India had a great problem with its communications system. The use of telephone poles or signal transmission poles was ineffective, because the country was so large. They are now using a satellite to transmit signals back to various locations in the country. This is much more effective and economical," said Professor Thongthot.

Besides saving money, using a satellite is almost twice as fast. And in transmitting and receiving signals, this is not limited just to sound signals. This also includes picture-television signals. Today, we receive such signals from abroad via satellite. These pictures are received by the satellite ground station at Siracha. But the systems in use today all come from abroad. Rates are high. Because those who build these systems have to charge for the technology and the cost of developing these systems. And of course they want to make a profit. As a result, we will have to keep paying unless someone here develops a similar system.

"Initially, this may be quite expensive. But it won't be as expensive as buying from abroad. If we have a chance to learn and develop, we should be able to compete with other countries. This is better than continuing to buy from them," said Professor Thongthot.

He added that a satellite ground station costs several tens of millions of baht. However, his study, which is expected to be completed this year, will show that we can achieve the same results at a cost of only 50-100,000 baht.

The satellite ground station planned by these professors will consist of the following equipment:

Signal reception dish: This item was built 8 years ago. It is 4 meters wide. It can receive signals from a satellite 36,000 km above the earth's surface.

Signal amplifier: This amplifies the signal that is received.

Frequency modulator: This converts a higher frequency into a lower frequency.

Signal filter: This filters the signals needed.

Signal amplifier: This amplifies the filtered signals to the desired level.

Signal modulator: This modulates the signals that have been filtered and amplified so that they can be used in the form of sound or picture signals.

Even though microwave technology is not new, there are several things that have been studied just recently and so they are not in widespread use and are still quite expensive. Also, they have been used extensively in military activities and so detailed studies must be done. The professor in charge of this research project has modified the existing equipment for use in this project.

"During the world soccer matches, we set up a test station to receive pictures and sound. We showed the matches to students and achieved good results," said Professor Thongthot about the results achieved.

As for the next step, which is to improve quality and lower costs, Professor Thongthot said that the cost of a station will not exceed 50,000 baht.

This will benefit national development in the future. That is, the communications system will reach every corner of the country, including remote areas that are difficult to reach.

If there is just one ground station and the signals are relayed to the villages, telephone and television reception will be a simple matter even in remote rural areas," said Professor Thongthot.

But this means that Thailand must have its own satellite. Or it can rent a satellite and use it jointly with others. Purchasing a satellite for Thailand was proposed once before.

"We do not yet have the capabilities to produce our own satellite. It will be about 10 years before we are able to do that. That requires the coordinated use of several types of technology," said Professor Thongthot when asked about a satellite. But he emphasized that a satellite costs less than a fighter aircraft and it is more useful. We should have a satellite. The way out is to receive signals from the satellite of someone else. That is, we can rent a satellite, which is what army color television Channel 7 is doing today.

However, the ultimate goal of those involved in the "Satellite Ground Station" project is not to build just a model station. They also want to conduct studies that have military applications, particularly on guided radar using microwaves. They will be able to do this after completing this phase of the study.

"This is my goal. Things can be completed in a year. And it's not expensive. Once this is completed, we will be able to target long-range strategic points accurately. Take tanks, for example. Even if they are moving, we will be able to hit them without fail," said Professor Thongthot confidently. He added that "this is my dream. Because we have to spend huge sums on weapons. Each rocket costs more than 20 million baht. The farmers have to work hard and sell a lot of rice to purchase these weapons. If a rocket misses the target, the money is wasted. Using microwave technology will be of great help."

Professor Thongthot talked about the possibility of this and mentioned the things that discourage him. He said that some administrators prefer to purchase things from abroad instead of developing things domestically. They should be looking at the long-term effects. He said that even though the initial research will be expensive, in the long term, this will benefit the country.

This satellite ground station research project will disclose something about the future of technological development in Thailand and reveal the real intentions of scholars who want to build the country and ensure that it keeps pace with neighboring countries. But will anyone see the value of this?

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THAILAND

COMMUNICATIONS SATELLITE PROCUREMENT DECISIONS REPORTED

U.S., PRC Options Viewed

Bangkok DAO SIAM in Thai 20 Mar 87 p 3

[Unattributed report: "Decision on Satellite Purchase Near, China Proposes Countertrade System"]

[Text] Ministry of Communications is considering the communications satellite project. At present, a Chinese company and an American company have made proposals. As for constructing satellite control stations this year, another nine stations will be built at a cost of approximately 120 million baht in order to cover the north and northeast.

Mr Suraphan Chinwat, the deputy minister of communications, discussed the progress that has been made on the communications satellite project. He said that proposals have been received from two companies, the American Hughes Company and the Chinese Great Wall Company. The Chinese minister of space came to see him on 16 March in order to discuss the details.

Mr Suraphan said that both the Chinese and American communications satellites are of good quality. The Ministry of Communications has established a committee composed of representatives from all the units that will use the satellite, such as the army, the navy, the air force, the Ministry of Agriculture and Cooperatives, and the Ministry of Science, to discuss the matter.

As for the Chinese proposal, Mr Suraphan explained that the good thing about this is that half of the cost of the satellite could be paid for in agricultural products. Or this could be a joint investment project. China would benefit from using the satellite, whose range will cover part of China, too. China wants \$110 million for two communications satellites, with each having 10 signal channels. The cost of the American satellite, which has 24 signal channels, is 10-20 percent higher.

Mr Suraphan talked about the benefits of this project. He said that we will be able to save money. Because today, we rent about five channels from the Palapa and Intelsat satellites. This costs us about 100 million baht a year. Besides this, we will be able to earn revenues by renting channels to neighboring countries such as Burma and Vietnam.

In conclusion, Mr Suraphan said that in building satellite control stations this year, the Ministry of Communications has directed that another nine stations be built at a cost of 120 million baht in order to cover the north and northeast. The Ministry of Communications has selected five of the nine companies proposed. It is expected that the deliberations will be completed by the end of April 1987. After construction has been completed, we will have a total of 24 control stations.

#### PRC Delegation Meets Chawalit

Bangkok DAO SIAM in Thai 13 Mar 87 pp 1, 16

[Excerpt] Mr Sun Chiatang, the Chinese minister of space administration, and Mr Uger, the vice president of the China Great Industry Company and the son of the deputy president of the People's Republic of China, arrived at Don Muang Airport at 2200 hours on 12 March. The purpose of this visit to Thailand was to discuss the satellite communications project and persuade Thailand to purchase the Chinese satellite in view of the low price of China's satellite.

Mr Sun Chiatang and Mr Uger were guests of the S.S. Enterprise Company located at 58 Ngamduphli Lane, Bangkok Metropolitan. The president, vice president, and managing director of this company are Mr Suwit Chansombun, Mr Uthai Uthensut, and Dr Man Phatrothai respectively. Mr Sun and Mr Uger are scheduled to meet with senior administrators. For example, they will meet with Gen Chawalit Yongchaiyut, the RTA CINC, on Monday and with Admiral Supha Khotseni, the supreme commander.

The welcoming committee arranged for Mr Sun and Mr Uger to stay at the Shangarila Hotel. Officials have taken strict security measures to ensure the safety of the visitors.

#### PRC Price an Attractive Factor

Bangkok DAO SIAM in Thai 16 Mar 87 pp 1, 16

[Excerpt] Mr Sun Chiatang, the minister of space administration, People's Republic of China, Mr Uger, the son of the vice president of China and the vice president of the Great Industry Company, and their entourage traveled to Thailand as the guests of the M.S.S. Company. The president, vice president, and managing director of this company are Mr Suwit Chansombun, Mr Anothai Uthensut, and Dr Man Phatrothai respectively. They came to Thailand in order to discuss the use of a Chinese satellite in Thailand's communications.

After Mr Sun Chiatang and his party arrived, they met with Gen Thianchai Sirisamphan, the deputy prime minister, at the Government House. They also visited the Chinese embassy and granted an interview to the press. The Chinese

Press Association held a banquet. On Monday, 16 March, Mr Sun and his party will meet with Gen Chawalit Yongchaiyut, the RTA CINC, at Suan Phuttan. After that, they will meet with Mr Banhan Silapa-achan, the minister of communications.

In his meetings with Thai administrators, Mr Sun has recommended that Thailand use a Chinese satellite in carrying on communications activities in Thailand. This proposal has generated much interest. The Ministry of Communications and the units concerns are preparing to submit the details and data to the cabinet for a decision. The Chinese satellite is cheaper than the American satellite.

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CSO: 5500/4318

Even the U.S. space station, unveiled with much fanfare by the National Aeronautics and Space Agency (NASA) last May, will only house a regular crew of six to eight when it goes into operation in the mid-to-late 1990s. The Soviet equivalent is bigger (12-20 people) and is being built in orbit right now. There may be Soviet shuttle vehicles supplying it even before the American shuttles fly again.

Meanwhile the Europeans, the Canadians and the Japanese are all thinking about ending their participation in the \$13 billion American space station project because of its probable involvement in testing "Star Wars" technology. If they do pull out, they will probably collaborate in a rival space station — which would give the British Hotel project a great fillip, as it promises to lift tonnage into orbit far more cheaply than vertical booster rockets.

Space is getting quite crowded,

and not many in the crowd are Americans. Even before the Challenger disaster, there were only 15 American space launches in 1985, compared to over 100 Soviet launches. It is not fundamentally NASA's fault, either, except insofar as it loyally tried to do too much with too little money.

The real problem is that for 25 years the United States has been trying to disguise most of its military space program as civilian and has funded it largely with civilian money. But there was never enough NASA money to meet commercial and scientific needs and those of the military, too, and so it ended up cutting corners. Who was really calling the shots is now painfully evident in the overwhelmingly military character of future shuttle missions.

And one of the prices to be paid for that is the fact that American companies are now negotiating to launch their satellites on French, Japanese, Chinese and even Soviet rockets.

/9317

CSO: 5520/23

## CRTC CHIEF VOWS TO PRESERVE AGENCY INDEPENDENCE

Ottawa THE OTTAWA CITIZEN in English 5 Mar 87 p A10

[Text]

The chief broadcast regulator says he will fight to preserve the independence of his agency, now embroiled in a public feud about who should be pulling the strings over Canada's airwaves.

André Bureau, chairman of the Canadian Radio-television and Telecommunications Commission, also says he is a little annoyed at suggestions he has been unco-operative during a government review into Canadian broadcast policy.

And he says an open dispute with a Commons committee over who should influence broadcast policy is in no one's interest.

The Commons communications committee is currently reviewing a task force report that recommends how broadcast policies should be reshaped.

A quiet rivalry between the committee and the CRTC spilled into the open last week with the public exchange of letters between Bureau and committee chairman Jim Edwards, Tory MP for Edmonton South and parliamentary secretary to Communications Minister Flora MacDonald.

Bureau basically ignored a request to slow the agency's workload, prompting Edwards to say the committee should write again, this time admonishing the CRTC boss for not directly answering the question.

But Bureau says he is not sure exactly what the committee wants. Besides, the committee review is long-term, could stretch to who knows when, and the agency can't put off its work.

"Please, we have to recognize from that

start the task force was asked to look into the future of broadcasting to the year 2000," Bureau said in an interview.

"We're looking at broadcasting now."

The Commons committee fears its review will be redundant, that it will be behind the times, as New Democrat MP Lynn MacDonald put it, while the commission forges ahead on

key issues the government hasn't even tackled yet such as specialty TV channels.

A deadline for new channel applications was formally postponed once to March 12 from Oct. 24.

Bureau says some bidders have been waiting years for the commission to proceed with hearings on new youth, family and religion stations, for example.

He declined to say whether the deadline would be postponed again but that he would put off other matters "if there is good reason for us to..."

Still, "we just can't sit and wait."

Bureau added that he has worked well under four communications ministers, including MacDonald, and that he has clear responsibilities.

"We would surely fight for our preservation of the independence," of the CRTC. "We will surely fight for that."



Bureau added that he has met several committee members on various occasions, offered to discuss his agenda with them and that he is available anytime.

"I don't think it's in the interest of the commission and the committee that we are at war. That's not my perception anyway."

The two chairmen of the broadcast task force said Wednesday that Bureau reneged on a deal that his commission would delay calls for applications on special television services.

Gerald Caplan and Florian Sauvageau told a Commons committee that Bureau asked them last summer to sever their deal with him.

Bureau wanted to proceed with proposals on such services as youth, family, news and religious channels even though he had agreed in writing in July 1985 to wait until the Caplan-Sauvageau report was finished.

/9317

CSO: 5520/23

TELEGLOBE ACQUIRES STAKE IN FIBER OPTICS VENTURE

Toronto THE TORONTO STAR in English 19 Mar 87 p C19

[Article by Adam Mayers]

[Text]

Telelobe Canada has bought a 10 per cent stake in a consortium of 24 companies that will lay two underwater fibre-optic telecommunications cables — one between North America and Europe and the other between Spain and Italy.

The company announced yesterday its share of the project will cost \$78.2 million, of which \$23.7 million will later be recovered by selling some of the circuits to other carriers.

The transatlantic cable between Canada and the U.S. and Britain, France and Spain is expected to be laid in 1990 and in service the next year, Telelobe spokesman Bertrand Morin said.

Telelobe, whose \$488 million sale to Montreal's Merhotec Data Inc. was approved by the federal government last month, said the project will help ensure that it meets Canada's needs for transatlantic telecommunications through

the year 2000.

The Montreal-based company provides all of Canada's overseas telecommunications connections by either satellite or cable.

The agreement signed in Madrid yesterday calls for the construction and maintenance for two fibre-optic cables: TAT-9 in the North Atlantic and MAT-2 in the Mediterranean.

TAT-9 will link Canada and the U.S. to Great Britain, France and Spain. MAT-2 will connect Spain to Italy.

Telelobe has 1,700 telephone circuits in the North Atlantic and the new cable will increase that to 7,300.

The TAT-9 will also have a landing point in Canada, which will reduce the need for transmissions through U.S. facilities, Morin said. At present the only Canadian transatlantic cable link is at Mill Village in Nova Scotia.

/9317

CSO: 5520/23

## SPAR AEROSPACE UNVEILS MODEL OF ANIK E SATELLITE

Toronto THE TORONTO STAR in English 19 Mar 87 p C1

[Article by Andrea Gordon]

[Text]

When many Canadians hear the name Spar Aerospace Ltd., they probably think of Canadarm.

That's the robotic arm that travelled aboard the U.S. space shuttle and put Canada on the map in terms of space technology. It was built by Toronto-based Spar under the leadership of chairman Larry D. Clarke.

But Spar is working hard to also establish itself around the world as a name synonymous with satellite technology.

That's why Spar, along with its main customer to date, Telesat Canada, chose the Business Opportunities in Canada conference at the Metro Convention Centre to unveil a model of the new Anik E satellite planned for launch in 1990.

"The Anik E represents a versatile and reliable satellite that we believe will sell in international markets in the next century," Spar president Don Pollock said in a news release yesterday.

Communications satellites can transmit telephone calls, radio and television programs over long distances and around the world. Telesat Canada handles transmissions via satellite in Canada.

Spar has already produced two Anik D satellites for Telesat Canada and built two satellites for Brazil. It is hoping to do more business with other countries.

Spar will gear much of its marketing to developing countries, where satellite communications has not been firmly established.

In October, Telesat announced that Spar had been chosen to produce two "new generation" satellites in a contract valued at \$180 million.

Known as Anik Es, the satellites will be the most powerful communications satellites in commercial service over North America.

Because they are what is known as "dual-band" satellites, they can provide both high-frequency transmission for business use and lower-frequency range for broadcasters. By combining both bands on one satellite, which Telesat pioneered about 10 years ago, the company saves money on launches and can pass those savings along to customers.

The Anik E will be as powerful as the C and D combined. It will be able to carry the equivalent of 56 television stations. Weighing in at 2,500 kilograms and measuring about 21 metres long, the satellites will have the power to transmit across North America.

The Anik Es, which will take about three years to build, will include about 50 per cent Canadian content, Spar vice-president Christopher Trump said in an interview. The bulk of that work will be carried out at the company's satellite and aerospace systems plant in St.-Anne-de-Bellevue.

Trump said the market price for the Aniks sold abroad could be anywhere from about \$200 to \$250 million for a pair, depending on the amount of work needed to establish earth stations. The satellites are usually sold in pairs to ensure backup in case of a problem with one.

/9317

CSO: 5520/23

## TELESAT MSAT SYSTEM FOR RURAL PHONES DISCUSSED

Ottawa THE OTTAWA CITIZEN in English 19 Mar 87 p D9

[Article by Greg Barr]

[Text]

Telesat Canada is pressing ahead with a proposed \$350-million satellite telecommunications system to serve remote areas of Canada, despite some critics' charges that the project may not live up to its potential on paper.

The project, dubbed MSAT, which has received about \$19 million in federal funding so far, would allow subscribers in isolated areas — even ships and airplanes — to hook into the public telephone network without any connecting telephone wires. Instead, the telephone signals would be bounced from a special satellite into the Bell Canada network, for example.

Telesat President Eldon Thompson said Wednesday that, despite his belief that MSAT has tremendous commercial potential, a number of hurdles must be cleared before the system can start operating in the 1990s. A decision on the final go-ahead for the project will be made in 1988.

"First, there's the \$350 million we'd need to raise, and people want to be sure they won't be losing their money on that kind of investment. Then there's the co-ordination with a similar project in the U.S. and signal frequencies to be decided. We definitely think there's a (commercial) business in MSAT, but a lot has to fall into place."

Still, one federal space program insider says MSAT has the potential to be a "white elephant," considering that cellu-

lar radiotelephone systems that began in major Canadian cities in 1985 are already spreading further away.

Thompson scoffed at that suggestion, saying the Department of Communications and internal Telesat studies define the initial market for MSAT as 60,000 subscribers in rural and remote areas.

MSAT was born in 1980 when the federal government began a two-year feasibility study, followed by a three-year, \$17-million project definition phase.

According to 1986 federal space program spending estimates, another \$15 million will be spent through to 1990 and 1991 to support Telesat Canada's initiative to get the system working by 1993. The federal government also intends to lease \$130 million worth of MSAT service, assuming the project goes through.

Thompson said Telesat will decide in the spring of 1988 whether to proceed with MSAT. By then, the U.S. system will have the green light from American regulatory agencies, and Canadian aerospace firms will have submitted bids to construct the MSAT satellite.

"In the meantime, we have to begin looking for sources of capital, considering the money to build the satellite and the network would have to be raised through debt-financing," Thompson said.

Telesat is 50 per cent owned by Canadian telephone companies (Bell Canada holds 25 per cent) and 50 per cent owned by the federal government.

ST VINCENT CLAIMS TV JAMMED BY BARBADOS SWITCH TO CH 9

St Vincent Complaint

Bridgetown DAILY NATION in English 3 Mar 87 p 1

[Article by Patrick Ward]

[Text]

ST. VINCENT AND THE GRENADINES TELEVISION (SVG-TV) wants Barbados' Caribbean Broadcasting Corporation (CBC) to get off Channel 9.

The reason is that SVG-TV has been using that channel for ten years and since last Tuesday, when CBC-TV also went to Channel 9, its switchboard has been jammed with complaints.

Paul MacLeish, manager of SVG-TV, in a telephone interview from the Kingstown station said the Barbados signal was so strong that certain areas of St. Vincent were receiving CBC-TV programmes while hearing the sound of those on SVG-TV.

In fact, he said, the main station (SVG-TV), located just above Kingstown, was able to receive a "crystal clear picture, with perfect sound and colour" from Barbados.

The disgruntled manager, noting his government would be taking up the matter with the Barbados Government said: "Since 1985, when we learned of their intention to transmit on Channel 9, we ob-

jected. This could only be sabotage, in view of the fact that they knew it would have caused problems and yet went ahead with the switch."

Other viewers, he said, were hearing unscheduled sounds while viewing scheduled films and still others had no reception at all.

He argued CBC had had ample time to change its plans and equipment to use another channel, but "went ahead and used Channel 9 for purely cosmetic reasons".

MacLeish said CBC operated on 900(radio) and "it sounds good to be using Channel 9, but should use another channel".

He said Barbados had promised its service would not cause interference. In view of this, he said, the onus was now on CBC to reduce its power or go to another channel.

General manager of CBC, Sam Taitt, could not be contacted for comment yesterday while Michael Rudder, secretary general of the Caribbean Broadcasting Union (CBU), said he was aware of the problem but had no comment to make at the moment.

## Barbados Government's Defense

Bridgetown DAILY NATION in English 19 Mar 87 p 24

[Text]

MINISTER OF TOURISM AND INDUSTRY, BRANFORD TAITT, said the Caribbean Broadcasting Corporation (CBC) got technical clearance in 1985 to transmit on Channel 9.

He made this disclosure yesterday in the House of Assembly during debate on the state-owned enterprise.

Taitt, who held responsibility for the Ministry of Information up until March 1 when it was added to the portfolios held by Prime Minister Errol Barrow, said clearance came from the corporation's technical advisers two years ago.

He said it was stated then that there would be no interference with St. Vincent and the Grenadines Television (SVG-TV) which also transmitted on Channel 9.

The minister said when the CBC files were reviewed, the board realised the matter had been thoroughly canvassed and the engineer at the corporation had made a definite statement to the ministry that a decision had been made at the technical level to transmit on the channel.

And, he stated it was quite improper for anyone to try to manufacture a problem between Barbados and St. Vincent.

Taitt stressed that a Government station has responsibility over and above earning a profit. When looking at the developmental aspects, he said, the question of money was secondary.

During his contribution to the debate, the minister said every Barbadian was a shareholder in CBC and areas of inefficiency in the corporation should be examined in an effort to upgrade the services offered by the island's lone television station.

He said the present board would continue to bring those programmes that contributed to the development of Barbadians, whether or not the programmes received sponsorship.

Taitt said that improvement of the cramped physical conditions in which personnel had to work at the station and replacement of the "obsolete" equipment used would be replaced to improve the quality and transmission of programmes to viewers.

/9317

CSO: 5540/083

DETAILS OF PROPOSED NEW REGULATIONS FOR TELEVISION CITED

Hamilton THE ROYAL GAZETTE in English 28 Feb 87 p 4

[Text]

Government yesterday tabled sweeping new regulations for television broadcasting.

Among the highlights of the new proposed regulations:

- At least one-fifth of daily broadcasting time between 7 a.m. and 6 p.m. must be allocated to artistic and cultural programming, children's shows, documentaries, educational programmes, news and sports.
- At least one-fifth of weekly broadcasting time between 6 and 11 p.m. must be allocated to artistic and cultural programmes, documentaries and educational shows.
- All programmes shown must be classified by the station into one of nine categories and advertised with those classifications. In addition to the ones mentioned above, the categories include general viewing, programmes requiring parental guidance and religious broadcasts.
- All "parental guidance" programmes must be announced prior to the broadcast and at intervals during the show if possible.
- The Broadcasting Commissioners may require a programme they have reason to believe contains anything "which is undesirable or offensive" to be submitted to them for pre-screening.
- No more than 14 minutes of advertising will be permitted during each hour except for periods preceeding Easter, Somers Day and Christmas when the maximum limit will be 16 minutes.
- Cigarette commercials will not be allowed until 10 p.m.
- Television stations will be required to keep a record on all programmes they broadcast and under which categories the programmes fall.

Mrs. Louise Jackson, chairman of the Broadcasting Commissioners, said the Television Broadcasting Service Regulations, 1987, represents an updating of policy first established in 1964.

"The old regulations were (written) when television was almost brand new," said Mrs. Jackson. "These regulations just bring things up to date and try to balance programming."

Mrs. Jackson said Bermuda's only television station — ZBM — already lives up to many of the new regulations,

including the broadcast of cultural and educational programmes and announcing when parental guidance is suggested.

"At one point many years ago, they (television stations) didn't devote as much time to artistic and cultural programming. This will ensure the level is kept up," she said.

"We have a very responsible television company operating now. It could be someone else will be coming along and start another station who isn't so responsible. That's why we need regulations."

Mrs. Jackson said the commissioners have had several meetings with the Bermuda Broadcasting Company, owner of ZBM, and station officials "have no quarrel" with the new regulations.

ZBM station manager Mr. Brian Lodge said yesterday he hadn't read the final draft of the regulations and didn't want to comment until he had.

The regulations were tabled in the House yesterday but not discussed.

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CSO: 5540/086



CHILE

BRIEFS

SCIENTISTS USE ELECTRONIC BUOY--A team from the Tropical Ocean Global Atmospherics, TOGA, has brought to Iquique and electronic buoy to collect ocean data. It is equipped with electronic sensors that will permanently monitor ocean currents, temperature, and pressure. This information is transmitted via satellite to a center that predicts future sea activity. [Summary] [Santiago Domestic Service in Spanish 1600 GMT 28 Mar 87 PY] /9599

CSO: 5500/2032

DIGITAL TELECOMMUNICATIONS ORDERED FROM SWEDEN'S ERICSSON

Stockholm DAGENS NYHETER in Swedish 28 Feb 87 p 12

[Article by Gunilla Tengvall: "Ericsson Receives Billion Kronor Order"]

[Text] Yesterday, Ericsson brought home a billion kronor order from Mexico. The Mexican Telecommunications Administration has ordered telephone stations and switching systems amounting to more than a billion Swedish kronor from Ericsson.

The order consists of two parts. One of them is from the Mexican National Telecommunications Administration and includes new digital AXE-stations and switching systems. Furthermore, the local Telecommunications Administration in the northern part of the country has ordered new AXE-stations for both domestic and international telecommunications.

"It is a large order. But Mexico is also one of Ericsson's most important markets," says Gunilla Possenius at Ericsson's telecommunications division in Stockholm.

"We have been in that country for over 80 years, and the last couple of years we have taken over parts of the market from ITT, mainly because ITT had trouble keeping their promised delivery dates for the counterpart to our AXE-system, System 12."

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CSO:5500/2470

REOPENING OF RADIO NANDUTI EXPECTED

PY131827 Asuncion ULTIMA HORA in Spanish 11 Apr 87 p 2

[Paid advertisement signed by Radio Nanduti, entitled "Radio Nanduti"]

[Text] We are committed to democracy and justice because we want a new time for our country, a time that our society deserves to experience.

For 25 years we have waved the banners of justice and democracy, facing all sorts of difficulties in a muzzled country, stubbornly engaged on the adventure of impartially disseminating news and ideas, encouraging the people to raise their own voice and thus to accomplish the miracle of a dialogue in which all of us can participate. Those who oppose democracy and justice hinted at their reaction on several occasions until, on 28 April 1986, we were the target of the first attack. Those who attacked us perhaps were the same hooded individuals who 5 days later, early in the morning, held up with impunity our transmission plant, breaking the equipment and stealing mobile units.

These attacks were followed by the electronic interference, the economic boycott, the cutting off of our telephone communications with foreign countries, the inevitable 90-day closure--due to the absolute lack of guarantees--and the courts' silent answer to our claims and reports.

ANTELCO [National Telecommunications Administration] suddenly issued a resolution "for the sake of" the Law of Telecommunications, canceling almost all radio station licenses and forbidding the stations that interrupted their transmissions from resuming them unless they normalize [preceding wor in boldface] their situation. It should be noted that Radio Nanduti is the only station affected by this resolution. In an effort to conceal the real purpose of the resolution, some journalists have claimed that other stations have also been affected. Yet the truth is that Radio Ypacarai closed down long ago, Radio Chaco Boreal has for years transmitted only on FM, and no one knows Radio Asuncion O.C., except for its shortwave broadcasts, which, incidentally, have never been on the air. In the past, this station had another owner and another name: Radio Teleco.

The ANTELCO resolution says radio stations must normalize their situation. This seems ironic to us, because for several years, Radio Nanduti has unsuccessfully tried to renew its license. We have not even succeeded in our efforts to pay the corresponding fees on our AM and FM frequencies, and on our communications and mobile units. We have the documents because we keep all the forms we have submitted to ANTELCO, and they bear the seal and signature of that institution.

However, despite everything, we have a strong and able team. We are a group of machines and men committed to a new time. We are ready to resume our work for this objective at any time. Each one of us is ready..technicians, journalists, editors, announcers, designers, clerical workers, and the assistant, who still keeps his job and, like everyone else, his hope and his determination.

This is why we hope to be on 1020 kHz on 14 April, as we have announced through all the media. The decision will be made by the court. The renewal of our license is not in our hands; it depends on others, just as the interference, the harassment, the seizure of our passport, and the car that follows us wherever we go also depend on others.

There is one thing that they have been unable to take from our hands and from our voice: our commitment to a NEW TIME.

/9738

CSO: 5500/2034

ANTELCO RESOLUTION CANCELS SOME RADIO LICENSES

Stations' Permits Expire

PY251603 Asuncion EL DIARIO in Spanish 21 Mar 87 p 10

[Text] ANTELCO [National Administration for Telecommunications] yesterday issued a resolution saying the concessions, permits, the licenses granted to various radio stations in Asuncion and in the interior of the country to operate broadcasting services have expired. ANTELCO has decided to open a bid on these concessions.

Another point in the resolution states that the Directorate for Radiocommunications and Frequency Control will draw up the appropriate specifications in accordance with the pertinent legal and technical rules and regulations.

The resolution also says "the radio stations that at the date of issuance of this resolution, have discontinued broadcasting will be unable to resume broadcasting until new concessions are granted."

When asked about this issue, Radio Nanduti sources said the abovementioned resolution, especially the preceding point, will preclude resumption of broadcasts by the radio station on 14 April. This resumption had been announced by the radio station, but because the radio station is not currently broadcasting it will now need to file a new application and wait for approval.

The resolution issued by ANTELCO, which regulates communications activities in our country, says the ANTELCO Administrative Council met on 18 March 1987 and discussed the point. "In view of internal memorandum No 31 of the Directorate for Radiocommunications and Frequency Control, which reported on the expiration of the concessions, permits, and licenses of various radio stations, and in accordance with legal provisions established under Law No 1296/67, the fundamental ANTELCO law, and decree No 26, 504/63, regulating broadcasting services, ANTELCO has the right to continuously control the telecommunications enterprises operated by individuals or corporations as concessionaries or licenses."

The resolution adds that "according to a report submitted by the Directorate for Radiocommunications and Frequency Control, there are several radio stations that are operating irregularly. The expiration dates for their concessions and permits have long since lapsed.

The ANTELCO says "it is clear from this report that various radio stations have changed ownership or are operating on frequencies different from the ones assigned, and as such the conditions specified in the authorized concessions and permits are not being met. It is ANTELCO's right to regulate all telecommunications services within the national territory and ensure the correct operation of all these services."

In conclusion, the resolution states that "under these circumstances it is appropriate to standardize the situation of the radio stations involved, declaring as expired the concessions, permits, and licenses whose expiration dates have lapsed."

#### Report Lists Affected Stations

PY251611 Asuncion EL DIARIO in Spanish 22 Mar 87 p 10

[Text] The following are the radio stations whose licenses have expired, according to ANTELCO: ZP15, Radio La Voz del Amambay; ZP32, Radio Ycuamandiyu; ZP40, Radio Nasaindy; ZP26, Radio Itapiru; ZP41, Radio Ypacarai; ZP70, Radio Primero de Marzo, ZP6 Radio Guaira; ZP27, Radio Mbaracayu; ZP9, Radio Comuneros; ZP31, Radio Mburucuya; ZP36, Radio Ypoa; ZP14, Radio Nanduti; ZP43, Radio Arapizandu; ZP41, Radio Nu Vera; ZP42, Radio Panambi Vera; ZP11, Radio Charitas; ZP21, Radio Centenario; ZP3, Radio Asuncion; ZP4, Radio Chaco Boreal; ZP8, Radio La Voz de Misiones; ZP20 Radio America; ZP23, Radio Mariscal Lopez; ZP99, Radio Parana; and ZP91, Radio Cerro Cora.

The list of [FM] radio stations whose licenses have expired includes: ZPV28 Radio La Cordillera; ZPV[100] Radio Canal 100; ZPV75 Radio Tayi; ZPV16 Radio Presidente Stroessner; and ZPV4 Radio Chaco Boreal.

#### Radio Nanduti Files Suit

PY311548 Asuncion EL DIARIO in Spanish 26 Mar 87 p 8

[Text] Radio Nanduti Director Humberto Rubin has filed a civil lawsuit seeking to suspend the application of NATELCO's resolution dated 19 March. The resolution says "radio stations that, at the date of issuance of this resolution, have discontinued broadcasting will be unable to resume broadcasting until new concessions are granted."

The claim presented by attorney Julio Cesar Vasconcellos, who is representing Humberto Rubin, says "the resolution questioned by this lawsuit was specifically issued to cover the medium wave frequency used by ZP14 Radio Nanduti, which operates on 1,030 kHz. Humberto Rubin is the director and owner of the station. The resolution seeks to arbitrarily and unjustly preclude the resumption of

broadcasting by Radio Nanduti on 14 April, as it was previously announced. ANTELCO's measure is an attempt to whitewash the jamming that prevented Radio Nanduti from broadcasting and that forced it to close temporarily on 14 January."

The allegation pointed out that on 14 January "according to a note bearing ANTELCO's stamp of receipts Rubin notified ANTELCO he was suspending broadcasts because it was impossible to continue due to the lack of police protection and the inability of the authorities to eliminate the jamming. The suspension, as the note stated, was temporary."

The plea asked the court "to suspend the resolution and allow Radio Nanduti to resume broadcasting on 14 April 1987, on its normal frequencies, as it was scheduled to do at the time Resolution 252 was issued."

/9738

CSO: 5500/2034

UNION DEMANDS END TO REPRESSIVE CAMPAIGN

PY071937 Paris AFP in Spanish 0444 GMT 7 Apr 87

[Text] Asuncion, 6 Apr (AFP)--The Paraguayan Journalists Union [SPP], an independent organization, today charged that the government forced one newspaper and one radio station to close and has harassed journalists in an effort to conceal its repressive actions.

In a communique, the SPP said some members of the mass media are participating in this campaign.

Among the repressive actions the communique mentioned the detention of Raquel Aquino, an 18-year-old high school student. Aquino was arrested by professors and directors of the Colegio Nacional of Asuncion while handing out leaflets expressing solidarity with a dismissed public school teacher. The communique said that Aquino is being held incommunicado in subhuman conditions.

Raquel Aquino, how is a member of the Business Sector Workers and Employees Trade Union (SEOC), has been submitted to unremitting psychological torture in violation of basic human rights and with the clear objective of undermining her resolve, the communique charged.

Other repressive actions reported by the SPP are the arrest of Pedro Salcedo, secretary general of labor union of the powerful oil-manufacturing Paraguayan Cotton Company (CAPSA), and repeated police raids during the meetings of this labor union. The SPP claimed such raids are requested by leaders of the central labor organization and of the ruling Colorado Party.

The SPP also reported the arrest of Interunion Worker Movement (MTI) Secretary General Victor Baez, who has been held incommunicado, and a police cordon around the place where MIT members were to launch a campaign to demand higher salaries.

The communique mentioned the arrest of leaders of the Tavapy II settlement and of the National Peasant Union (UNC), who have been held incommunicado. In the Tavapy II settlement, whose ownership is claimed by a Chilean citizen, joint military and police forces have harassed and tortured farmers, subjecting them to all sorts of mistreatment. The farmers have refused to leave their land.



The journalists demanded an end to the repressive campaign, the unconditional release of the imprisoned workers, respect for freedom of assembly and for the freedom to organize, an end to the siege of the Tavapy settlement, full guarantees for the settlers, and the reopening of the independent mass media that were closed by the government.

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CS0: 5500/2034

## PARAGUAY

### BRIEFS

SPANISH RADIO TO COUNTER CENSORSHIP--Madrid, 2 Apr (AFP)--Radio Exterior de Espana (Radio Nacional de Espana on shortwave) on 5 April will begin broadcasting a new program called "An appointment with Paraguay," which will air news on that country. The feature will be broadcast once a week during the program that carries news for the Americas at 2300 GMT. With this program, Radio Exterior de Espana will try to neutralize the censorship that the Paraguayan Government has imposed on the unofficial media, sources of the Spanish radio said. [Text] [Paris AFP in Spanish 1358 GMT 2 Apr 87 PY] /9738

CSO: 5500/2034

ASSOCIATION CALLS FOR NEW TELECOMMUNICATIONS ACT

Port-of-Spain DAILY EXPRESS in English 14 Mar 87 p 6

[Text] THE RADIO Telecommunication Association of Trinidad and Tobago (RTA) is seeking a new telecommunications act to include technological advances in the industry.

Speaking at a press conference on Thursday, public relations officer William Latchman said the act was established in 1939 at a time when there were only radios in the country.

Thus, he said, it did not cover most of the technology in the industry today. This made illegal most of the equipment in use, such as two-way radio, citizen bands (CB's), even the remote controls used for television sets.

Pointing to the Federal Communications Commission in the United States, which, Latchman said, was broad and inclusive, he said that under the current act, there existed no provisions for the licensing of repair telecommunications technicians.

Unlicensed people thus tampering with te-

lecommunications equipment resulted in loss of tremendous sums of money, Latchman asserted.

It was therefore imperative to jolt the government into establishing a new act, said secretary of the association, Noel Donowa.

Founded in 1984, the association, will be launched on March 22. Leading up to the launching and throughout the following week, a number of activities will be held.

## AFGHANISTAN

### BRIEFS

TV, RADIO COMPLEX--Kabul, March 16, BAKHTAR--The foundation stone of new studios of television and new radio complex was laid by Najib, general secretary of the PDPA, CC, here today. In his speech, Najib talked about the attention paid by the PDPA and the state of the DRA for the development of the mass media. The new project of the studios of television will be financed from the ten million rouble credit of the Soviet Union, and the new radio complex will be financed from the 11.1 million dollar credit of the GDR. The construction work of the projects will be completed by the end of the first post-revolution five year socioeconomic development plan of the DRA, 1986-1991. [Text] [Kabul BAKHTAR in English 0427 GMT 17 Mar 87 LD]

/9716

CSO: 5500/4709

## LINK WITH EUROPEAN SPACE AGENCY ESTABLISHED

Madras THE HINDU in English 4 Mar 87 p 22

[Text]

The National Aeronautical Laboratory in Bangalore has set up a communication link with the information network of the European Space Agency in Frascati, Italy, enabling it to access the vast data base maintained by the ESA.

The information the NAL can tap covers some 360 data bases and data banks located in various parts of Europe and comprises over 60 million references in the various branches of science and technology, and other fields of knowledge. The subjects covered include: aerospace, computers, electronics, engineering, energy, physics, mathematics, materials and metallurgy.

Two computers, both IBM PC-XTs, have been installed at NAL and these will access the main computer of the ESA through a high-speed (2,400 bps) dedicated circuit.

The facility is not being restricted to researchers at NAL, but is being offered to all public sector undertakings, Government departments, universities and other academic institutions, and registered research and development laboratories. However, the information gathered is to be used only for bonafide research activity.

Access charges vary from \$75 to \$100 an hour depending on the data base. In addition there are charges for on-line printing, off-line printing and download.

A typical search, lasting not more than 20 minutes, plus online printing of about 50 abstracts will cost about Rs. 700 for researchers at NAL and at organisations such as CSIR, DRDO and BEL, which helped fund the project.

For all other organisations, a 50 per cent surcharge will be levied.

Users outside Bangalore can send their queries or topics on which information is needed to NAL through the telephone or telex. The information picked up from the ESA database will be relayed to them by telex or post as required.

/9317

CSO: 5550/0107

## PRO-KHALISTAN BROADCASTS MONITORED FROM SRI LANKA

New Delhi PATRIOT in English 6 Mar 87 p 1

[Text]

A powerful, short-wave transmission emanating from Sri Lankan territory has started increasingly vociferous 'pro-Khalistan' broadcasts.

Meant for "North Indian listeners", the programme of about two hours' duration every day is in Punjabi and English. Over the last few weeks, broadcasts have been concentrating on the "historic importance of Gen A S Vaidya's assassination... contributed handsomely to the cause".

The transmission on frequencies of 7010 kHz in the 41 meter band and 9705, 9675 and 9560 kHzs in the 31 meter bands are in the morning and late evening hours.

The clandestine broadcast on the 7010 kHz channel is a clear intrusion into the Radio Hams' bands, where no other broadcasting activity is allowed.

The transmission calls itself 'The Voice of Tamil Eelam'. There already exists a station of the same name, considered very popular and of older version. However, there is no similarity

whatsoever between the contents of the two broadcasts. While the pro-Khalistan broadcasts primarily engage in spreading anti-India sentiments, the older clandestine activity is more in tune to its name, and has been broadcasting items concentrating on the ethnic issues in the island.

What has given credence to the fact that the "pseudo" VOTE is operating from Sri Lankan territory is that this radio activity overcomes jamming from Eelam militants. Communications experts and experienced 'Hams' believe that this pirate station is using Sri Lanka Broadcasting Corporation's transmitting facility at Ekala near Colombo which is equipped with two 100 kilowatts and three 35 kilowatts transmitters, adequate enough to reach north India.

The first indication of the hostile radio programming targeted to north India was confirmed when in January last listeners monitored the anti-India broadcasts in Mhow in Madhya Pradesh.

/12379

CSO: 5550/0109

INFORMATION MINISTER TELLS PLANS FOR TELEVISION

Calcutta THE TELEGRAPH in English 3 Mar 87 p 4

[Text]

**New Delhi, March 2:** Doordarshan will soon have a three-tier service comprising primary, national and local services.

This was disclosed today by the minister of state for information and broadcasting, Mr Ajit Panja, in the Lok Sabha in a written reply to a question by Prof. Narain Chand Parashar.

The minister said that each major state would have its own primary service in the language of the state, originating from the television centre at the capital. This service in due course would be available throughout the states.

Mr Panja said programmes for the national service would continue to be contributed by regional kendras and the service will originate from Delhi. They will be relayed by all the transmitters in the country.

In the four metropolitan cities which had a multi-lingual viewership with distinct cultural characteristics, local service require longer transmission time and hence a separate channel would be provided, Mr Panja said.

To utilise the medium of television for aiding the achievement of various national objectives, the minister said it was necessary to create facilities for communicating with the people in their own language. At the same time, he said, viewers should be made aware of the culture, tradition and development of the country.

/9317

CSO: 5550/0106

## BUSINESSMEN PROPOSE PANEL TO IMPROVE TELECOMMUNICATIONS

Calcutta THE TELEGRAPH in English 13 Mar 87 p 8

[Text]

New Delhi, March 12: The Federation of Indian Chambers of Commerce and Industry (FICCI) has suggested the setting up of a telecom commission covering the entire spectrum of activities in telecommunications, which has now been identified as one of the five major national sectors by the Prime Minister.

In order to achieve the objectives of "The mission: Better communications", FICCI has called for setting up task forces on various aspects of technology—sources, transfer and absorption, coordination and intermeshing of R and D work, and defining areas where the private and public sectors can concentrate their manufacturing effort.

The suggestion are contained in a FICCI study prepared for the workshop on "Future of telecommunications: User needs and business opportunities" to be held here on March 14.

Stressing the need for joint efforts to achieve targets, the study suggests manufacture of switching and transmission equipment by the private sector also, broadbanding of licences, extension of excise and custom duty reliefs applicable to computers to telecommunication equipment, import of samples

under OGL not exceeding Rs 5 lakhs per annum at nominal customs duty, incentives for raising funds to enable corporations, etc, to adopt specific areas for establishing communication network, and leasing of some areas to private companies to instal communication facilities.

According to the study, the current target of 19 million telephone connections by the year 2000 will still leave India way behind other countries. The targets of six lakh public telephones or one in every village and of 10 lakh public telephones in urban areas are also low.

The study notes that special facilities, which combine voice and non-voice communication, proposed for business and industry fall short of requirements. It, therefore, suggests that new enhanced voice and data services be made available nationwide.

The estimated investment required to achieve the target of the mission at current cost works out to Rs 50,000 crores or Rs 32,500 crores at international prices. According to the study, only economies of scale and a competitive environment can bring down the costs and prices. As such, appropriate policy changes are called for not only for improving the availability of telecommunication but also to make it affordable.

/12379

CSO: 5550/0110



## PLANS FOR SPECIAL TELECOM NETWORK TOLD

Calcutta THE TELEGRAPH in English 18 Mar 87 p 10

[Article by K K Sharma]

[Text]

New Delhi, March 17: The government has decided to set up a special telecommunication network for industry at a cost of Rs 110 crores, now that it has been found that there will be sufficient demand for such a system from companies.

The special network is to be launched by the end of 1988 and is expected to benefit all users of the telecommunications network by taking the load off the existing system and thus ease the present jamming of lines in peak hours.

A special study done by the Confederation of Engineering Industry (CEI) for the government has shown that an overwhelming majority of companies are in favour of the special network and are willing to pay the cost for it.

The network will incorporate data, teleprinter and facsimile facilities. The companies questioned agreed that there is a need for the special network and that it should incorporate facilities like data, teleprinter, facsimile, videotext and voice transmission.

The only condition they made was that the network should be efficiently managed and provide an instant means of communication to the subscribers. For this reason, they preferred that it should be in either the private sector or the joint sector rather than the public sector. A decision on this has still to be taken by the government.

The CEI study also shows that the companies want the network

connections in remote areas. Network connections were sought in over 155 cities. Similarly, to encourage dispersal of industries in backward areas, it was felt that they should be provided with telecommunications facilities.

With rapid advances in computer communications and media technology, there is a worldwide movement towards digital and broad-band capabilities that allow two-way transmission of high definition picture and text in bulk along with voice, video text and low-speed services.

Studies have shown that large trade and commercial organisations spend about 13 per cent of their total operation expenses on telecommunications services. There is a direct correlation between telephone density and per capita value added in industry.

In India, Maharashtra and Gujarat have the highest per capita value added in industry and also the highest number of telephones per 1,000 of the population. Assam and UP have the lowest per capita income as well

as the lowest telephone density.

Since telecommunications in India are notoriously poor and act as a major bottleneck for industry, there has been a positive response to the proposal by the department of telecommunications for the special network.

In this network, a subscriber will be connected by either optical fibre or radio telephone to a nodal exchange/switching

centre. The switching centres will communicate nationwide through rooftop microwave/satellite terminals.

The network will be installed in a phased manner. Phase I will be completed by December, 1988. The network is to cover the four metropolitan towns and eight second-level industrial towns such as Kanpur, Pune, Hyderabad and Bangalore.

(Economic News Service)

/12379

CSO: 5550/0111

INDIA

BRIEFS

ASLV TECHNOLOGY TERMED 'GOOD'--Preliminary reports on the launching of the Augmented Satellite Launch Vehicle--ASLV--have shown that a number of new technologies adopted by the Indian space scientists were successful despite the failure of the mission itself. According to the Indian Space Research Organization, the analysis carried out by the technical expert groups found that the crucial strap-on booster technology performed fully as expected. The failure of the first-stage motor to ignite on receiving ignition command from the on-board computer is said to be the main cause for the ASLV's premature descent. [Text] [Delhi Domestic Service in English 0240 GMT 7 Apr 87] /8309

CSO: 5500/4710

## PAN-ARAB TELEVISION NETWORK PLANNED

Amman JORDAN TIMES in English 22 Mar 87 pp 1, 3

[Article by John Rice]

[Text]

AMMAN — A Jordanian businessman said Saturday he plans to launch a pan-Arab television network by the year's end, relaying educational and cultural programmes by satellite throughout the Arab World.

Ziad Mango said by telephone from his office in Britain that programmes would be bounced off two satellites launched in 1985 by the Arab Satellite Organisation (Arabsat) to existing national television stations.

His Development Office Co., an offshore holding company with a presence in Jordan, last year leased six transponder channels on the satellites.

He said he hoped to complete agreements for transmission facilities by the end of April with Jordan, Tunisia and Morocco.

Technical trial broadcasts will start in summer, he said, and limited programmes are to start in October, with full operation scheduled for Dec. 1.

Eventually, he said, the company plans to relay programmes directly to viewers equipped with small antenna dishes, beginning with material aimed at schools and universities.

"We will be broadcasting large amounts of programming in the daytime, when most television corporations don't broadcast," said Mr. Mango.

Plans call for transmissions from 8:30 to 12:30 a.m. and from 2:30 to 5 p.m. local time for each country, with the emphasis on "educational and training material," Mr. Mango said.

His broadcasting company, Arab Spacescene Corp., has not yet signed agreements with any country. "But we've talked to a large number of them and they are very happy to go ahead and receive programmes because, really, they need material," Mr. Mango said.

He indicated 12 countries have expressed serious interest and said eight were needed to make the project financially viable. He declined to name the countries with which he said he was negotiating.

Mr. Mango said his company has either contracted or obtained options on about 15,000 hours of programming, which will be dubbed into Arabic, and that it hopes to produce about 45 per cent of its own material within five years.

Total programme expenditure, including original and dubbed material, will cost about \$2.5 billion over five years, he said.

The programmes "have to be politically, religiously and culturally neutral, otherwise they will not be acceptable to a large number of countries," he said.

A review panel of national representatives will screen the programmes, he said, and his 18-member executive board — to be announced next month — will select those to be shown.

He said dubbing already is under way in Syria, and he said his companies have obtained a half-interest in Tunis-based Zini Films.

"We hope also to be producing in Jordan and Morocco," he said.

Mr. Mango said marketing studies indicated a potential for advertising.

"The large corporations... are not really interested to make a serious effort at the market because they consider it so fragmented," he said. "But once we offered them the whole market in one swipe, there is a potential market of some 80 million... then the whole thing makes sense to them."

The company also plans to use its satellite resources to carry commercial data transmissions.

He said his companies have invested about \$68 million since 1971, and he said he expects the operating to start with a budget of about \$60 million a year, reaching \$500 million by the end of three years, when he expects it to return a profit.

COMMUNICATIONS MINISTER ON PRIVATIZATION OF TELECOMMUNICATIONS

Amman JORDAN TIMES in English 11 Mar 87 p 3

[Article by Rana Sabbagh]

[Text] AMMAN — Minister of Communications Muhieddine Al Hussein said Tuesday that the government has no plans to freeze the privatisation scheme of the government-owned Telecommunications Corporation (TCC).

"Suggestions to this effect (freezing privatisation of the TCC) are untrue. There is no retreat whatsoever on our announced plans to privatise the company," Mr. Hussein told the Jordan Times.

The Cabinet last year endorsed the transformation of the TCC into a public-shareholding company, with the government holding all shares, as a first step towards changing it into a properly market-oriented commercial entity. At a later stage, the government is to decide on whether or not it private sector participation will be sought. "We have endorsed the principle of privatising TCC and we still stick to our decision," said Mr. Hussein.

The minister was commenting on speculation that the government has withdrawn its preliminary approval to privatise a number of public companies into shareholding institutions operating on a commercial basis. The privatisation plans cover the TCC, the Royal Jordanian airline and the Public Transport Corporation.

"As far as we (the TCC) are concerned, things are moving on the right track. But I cannot

comment on the standings of other companies included in the government's privatisation plans," said Mr. Hussein. "We are heading towards transforming the TCC's status in a relentless drive. We have embarked on practical steps to achieve this goal," said Mr. Hussein, during an interview in his office at the ministry's new headquarters off the Eighth Circle.

The actual transformation of the TCC into a public shareholding company involves three phases and is expected to be completed in two years from now, said Mr. Hussein, who also chairs the company's board.

According to the minister, Jordanian expertise and the company's staff are mainly employed to do assessments regarding the three stages, and in rare instances, foreign expertise might be sought. Five experts from British Teleconsult, the consultancy arm of British Telecom — which itself has been recently privatised — completed their assessment of the viability of the TCC privatisation.

The first step is working on a new financial and accounting order for the TCC, changing its accounting procedure from the government accounting method into commercial notes and balance sheets, he explained. "It will be ready in a year from today," the minister said.

**Draft law**

The second stage of the company's transformation would be "charting a law," to govern its activities through legal means.

A year or more will be needed to draw up the company's draft law, before it is endorsed by the Cabinet, Parliament and later enforced by Royal Decree, he added.

Stage three will entail evaluating TCC's assets based on a profit to capital ratio to determine the value of each share, and the number of shares to be divided amongst the public sector.

"If we decide to sell shares to the private sector, we'll be seeking underwriting companies and some consultancies — if needed — to guide the process," Mr. Hussein said. "We shall need a long time from now before the third stage is completed and before we decide on whether or not we want the private sector's participation," he continued.

The TCC, which employs almost 4,000 staff, posted JD 42 million in total revenues for 1986, out of which JD 22 million were counted as net profits, according to Mr. Hussein.

#### **Private participation**

Indicating government hesitance over private sector participation in the TCC, he said: "Until now, there is no concrete visualisation on the volume of and the possibilities of opening the door for the private purchase of some of the TCC's total shares."

"Private sector participation will depend on the government's attitude and perceptions when the right moment comes in the future," he said.

Mr. Hussein stated that the privatisation scheme pertaining to the TCC was not launched to improve its financial position or to increase its revenues, which are stand out in comparison with other service-oriented public-owned companies.

According to the minister, the whole step was undertaken in order to provide the corporation with financial and administrative independence and flexibility as well as to remove the red-tape in decision making and taking.

TCC, has held a monopoly over the Kingdom's telecommunications services since 1971, and well-placed sources have estimated the corporation's total assets and investments at JD 400 million.

/13104

CSO: 5500/4513

ARABSAT FACES DEBT PROBLEMS; ROLE IN ARAB WORLD

TB251620 Kuwait KUNA in English 0841 GMT 24 Mar 87

[Text] Kuwait, March 24 (KUNA)--The Arab Satellite Corporation (ARABSAT) is indebted by 80 million dollars, ARABSAT's Director General 'Abd-al-Qadir al-Ba'ayri revealed today.

In an exclusive interview with KUNA during his current stay in Kuwait, Ba'ayri added that ARABSAT was previously burdened with 100 million dollars debts and it is working now to reduce this amount.

On solutions drawn up by the corporation to reduce the foreign debts, the ARABSAT official said that they include increasing the utilization of the ARABSAT to increase the corporation's income, noting that ARABSAT has allowed the private sector to benefit from the ARABSAT and an agreement was signed with an Arab company to rent six channels for five years with an amount of 40 million dollars.

Ba'ayri said that the corporation reached a tentative agreement with creditor companies to reschedule ARABSAT's debts over a period of five year.

He said that the expected revenues of ARABSAT until 1992, will enable the corporation to cover all its debts and also the costs of the annual operation process.

ARABSAT's main goals is to convert the modern technology to Arab states, set up communications networks that link all Arab countries and to encourage Arab industry in the field of satellites, al-Ba'ayri said, and added that the corporation was able to accomplish the space network that serves all Arab states.

The ARABSAT director general said there are 14 Arab ground stations that link all the Arab world, noting that three Arab stations will be opened this year in Syria, Libya and Somalia while the rest of the Arab countries' stations will be ready next year.

He noted that there are 40 Arab technicians and engineers who are trained to operate the satellites.

Meanwhile, the official said that Israel's threats directed against ARABSAT, before it was launched, have been futile.

On issues to be discussed by the General Assembly of the Arab Satellite Corporation, to be held in Libya next April, al-Ba'ayri said the major item on the agenda is the ARABSAT's debts.

/6662

CSO: 5500/4606



## SATELLITE CENTER IN PLANNING STAGES

Muscat TIMES OF OMAN in English 26 Mar 87 p 6

[Text]

A plan to set up a national remote-sensing centre to receive, process and distribute satellite information for various developmental activities is under way in the Sultanate.

The plan comes under a \$4 million (RO 1.55 million) regional project of the United Nations Development Programme which has undertaken to help the Arab states establish national centres and train men in processing satellite data.

Dr Mohammed Ahmed Tarabzouni, a UNDP consultant, who visited Oman last week, told the press that Oman has been allotted \$200,000 (RO 77,520) by UNDP for this project.

Dr Tarabzouni said UNDP will help to equip Oman with the necessary remote-sensing apparatus and train men from various Government bodies that are likely to use satellite data.

Dr Tarabzouni's visit was aimed at identifying the most suitable site for setting up the remote-sensing centre, and to assess the training needs of the Sultanate.

He suggested that the Sultan Qaboos University at Al Khoudh could be ideal place for the setting up of the centre, and said that between six and 10 Omanis will be trained by the UNDP under regional training programme.

Dr Tarabzouni, who is also the Director of the Space Technology Department at the King Abdulaziz City for Science and Technology, said the remote-sensing centres to be set up in the AGCC states will receive satellite data through the \$40m receiving station in Saudi Arabia, which started operating in January this year.

"Data received from LANDSAT 5, SPOT 1, and NOAA can greatly enhance the development process," he said.

The potential use of remote-sensing data lies in areas such as fisheries development through data on water currents; land-use planning and crop studies; scientific planning of urban development through data on population; conservation of the environment and prevention of pollution; advanced meteorology; and mining.

Dr Tarabzouni, met officials at the Ministries of Agriculture and Fisheries, and Petroleum and Minerals; the Council for Conservation of Environment and Water Resources; and the Sultan Qaboos University.

/9317

CSO: 5500/4511

## TELECOMMUNICATIONS AGREEMENT SIGNED WITH JAPAN

AB251900 Accra Domestic Service in English 1300 GMT 25 Mar 87

[Text] Ghana and Japan today signed an agreement for the rehabilitation of the external telecommunications line plant in the country. Under the agreement, Japan will make available to Ghana an amount of \$4.5 million for the purchase of products and services needed for their rehabilitation. The secretary for foreign affairs, Dr Obed Asamoah, signed for Ghana and the Japanese charge d'affaires in Ghana, (Tiruhisa Ariga), signed on behalf of his country.

Dr Asamoah emphasized the importance of telecommunication to the economic development of the country. He said very often, valuable time and energy have been wasted running around to have things done. This unfortunate situation contributes considerably to inefficiency and retards progress. He said a good and efficient telecommunications system would compensate for this poor state of affairs and the bad conditions of our roads and other transportation networks. Dr Obed Asamoah said it is for this reason that the PNDC is pleased with the Japanese assistance. He recalled other Japanese assistance to the country since 1982 and said it shows the level of friendship and cooperation between the two countries. Dr Obed Asamoah expressed appreciation to the government and people of Japan for their support for the country's economic efforts and hoped with the execution of the agreement, the telecommunications system would be much improved.

Mr (Ariga) in reply said Japan's continued assistance to Ghana is a clear demonstration of the confidence and belief of the government and people of Japan in the determined efforts of the PNDC government to ensure economic recovery. He said while (?noting) the achievements of the country during the past few years, his government acknowledges the dedication and hard work being displayed by Ghanaians in the arduous task of reviving their economy. Mr (Ariga) pledged his country's continued effort to assist Ghana in her determination to improve the social conditions of her people and at the same time deepen and strengthen the existing bonds of cordiality and understanding between the two countries.

## NIGERIA

### BRIEFS

NIGERIEN MICROWAVE LINK--A microwave link connecting Niger Republic with Nigeria has been completed. This is part of efforts to ensure that African countries communicate directly without going through Europe. The minister of communications, Colonel Tanko Ayuba, announced this yesterday in Argungu, Sokoto State, while commissioning the Argungu-(Alyebo) telephone exchanges. The two exchanges have a capacity for 2,500 lines and are part of the 9 planned for Sokoto State under the third and fourth national development plans. [Text] [Lagos Domestic Service in English 2100 GMT 11 Mar 87 AB] /9274

CSO: 5500/42

MEMBERSHIP IN INTELSAT REGISTERED

Kaduna NEW NIGERIAN in English 7 Mar 87 p 9

[Text] The Republic of Togo Thursday became the 113th member of the International Telecommunications Satellite Organisation (INTELSAT) during a signing ceremony at the U.S. Department of State, where it registered the instrument of accession.

Togo will have a minimum investment share of 0.05 percent.

Togo's signatory of INTELSAT will be the Societe Autonome Des Telecommunications Internationales Du Togo (SATELIT), represented at the ceremony by Togo's Ambassador to the United States, Ellom-Kodjo Schuppius.

Welcoming Togo to the organisation, INTELSAT's acting Director-General, Mr John D. Hampton, said: "The Republic of Togo today joins INTELSAT's other 112 member nations in a global partnership bringing state-of-the-art telecommunications services, on a non-discriminatory basis, to all parts of the globe. We welcome Togo's participation."

INTELSAT, based in Washington, is an international co-operative of 113 member nations which owns and operates the global commercial communications satellite system used by countries around the world for international communications, and by 25 countries for domestic communications.

In addition to international telephone and television services, INTELSAT also offers a digital service for handling worldwide video teleconferences, facsimile, data, packet switching, digital voice, electronic mail, and telex, as well as a data gathering and distribution service using microterminals (as small as two feet in diameter), and basic satellite communications for rural and remote communities.

/9274

CSO: 5500/42

# MOSCOW DERIDES POLISH SECTION OF RADIO FREE EUROPE

LD291752 Moscow International Service in Polish 1300 GMT 29 Mar 87

[Text] After the embarrassing denials of the Americans on Radio Free Europe, a change in the post of the director of the Polish Section took place, in spite of everything. Zdzislaw Najder, who was sentenced to death in Poland in absentia for cooperating with foreign intelligence, has resigned. His place has been taken by Marek Latynski. It was finally understood in Washington that such detestable figure as Zdzislaw Najder at the head of the Polish service of Radio Free Europe is really not in the interests of the broadcasting station. It was, therefore, decided on the other side of the ocean to escape to something of a kind of psycho-political makeup.

The decision, as everything seems to indicate, had been maturing for a long time, and the change was prepared slowly, proof of which is, for example, that the candidate for the change has been prepared for at least 18 months. Zdzislaw Najder's deputy, Marek Latynski, was taken at that time for training to the central headquarters (as a gift?) of the Voice of America, and has only now returned to Munich, but has already taken to the post of the director of the Polish Section.

Indeed, all the socialist countries have much to thank these socialist international relations for. But time passes. Of course, every socialist country today, by virtue of its development, has the potential to make an immeasurably greater contribution to the enrichment of the socialist community than ever before. For this, the first thing that is necessary is political relations that are smooth and rich in content.

But, of course, great importance also lies in the practical relations between Czechoslovakia and the USSR. We have very intensive economic links with Czechoslovakia. But of course, these links could provide a greater return if we can restructure our foreign economic activity. When we speak of the need to create joint enterprises whose products would be marketed not only in our country and Czechoslovakia, but also on the markets of third countries, then what is needed is not just good intentions, but the appropriate economic mechanism. The problem of elaborating such an economic mechanism is not decided at summit level, of course. But the political framework of this process is determined precisely by summit meetings.

Of course, the problems that our friends are engaged in resolving are always of vital interest to us, because our friends' concerns are our concerns. The Czechoslovak comrades are working to implement the decisions of their congress, which outlined a broad program for the development of socialist construction; they also are now raising the question of accelerating the social and economic development of the country. In this regard it is characteristic that the latest plenum of the CPCZ Central Committee was absolutely in harmony with the conclusions and ideas that were heard at the CPSU Central Committee January Plenum.

I think that taking into account that both Czechoslovakia and the USSR are working actively in the interests of improving the situation in Europe, one can expect that the exchange of opinions between Comrades Gorbachev and Husak also will enrich our conceptions of the possibilities of those actions, those practical steps that would lead to Europe's really becoming a continent of peace, cooperation and stability. Therefore, we can expect great results from this visit.

/12858

CSO: 5500/1028

# DPRK-USSR TELEVISION COOPERATION AGREEMENT

SK110815 Moscow International Service in Korean 1130 GMT 10 Mar 87

[Text] A group of specialists of the DPRK Radio and Television Broadcasting Committee, who received training in the Moscow Central Television Station and in the television station in Minsk, the capital of Belorussian SSR, last December, have stayed in our country.

Prior to returning to their country, the reporter of this radio station had an interview with Comrade Yi Tong-suk, director of the Technical Department of the Television Bureau of the Korean Central Broadcasting Committee:

[Begin Yi Tong-suk recording] At a time when the traditional friendship between Korea and the Soviet Union is developing excellently each day, we visited the Soviet National Television and Radio Broadcasting Committee and realized a technological exchange between our two countries in domain of television broadcasting technology. We are very pleased over this.

During our stay in Moscow and Minsk, we personally witnessed that the Soviet people have attained a number of successes in their socialist construction by upholding the decisions of the 27th CPSU Congress. We also became aware of the successes and experiences obtained by the Soviet people in the sector of television and radio broadcasting technology.

We also rejoiced over the fact that technical functionaries of the two countries have had opportunities to frankly exchange opinions concerning various technical problems in the sector of television broadcasting technology.

Technical progress in television is of great significance in developing television transmissions. Therefore, I believe it is beneficial for the technological development of television broadcasting in the two countries that technical functionaries of Korea and the Soviet Union frequently meet each other and exchange opinions concerning television technology.

That the broadcasting organizations of our two countries signed an agreement in February this year is a good example of this. We hope that the exchanges between our two countries in the sector of television broadcasting technology

will be further strengthened. I will return to my country with good impressions of the warm hospitality extended to us from the Soviet people and the functionaries in the television broadcasting field while staying in the Soviet Union.

I wish the Soviet people greater successes in their socialist construction and the struggle to safeguard world peace. I also wish the people in the field of the Soviet television broadcasting successes on the path of modernizing the television technology sector.

/8309

CSO: 4107/162



SAKHALIN LOCAL TV BEGINS SATELLITE RELAY

PM031203 Moscow SOVETSKAYA ROSSIYA in Russian 31 Mar 87 First Edition p 1

[S. Saktaganov report: "Television Bridge for Islands"]

[Text] Yuzhno-Sakhalinsk -- Not a television set but... a satellite received the signal from an "Orbita" station. For the first time in our country, experimental transmission of broadcasts by the local television and radio committee was conducted on Sakhalin. As of 1 April such programs will be seen three times a week in many rayons of the island oblast.

Generally speaking no one in the islands is surprised to see television. Such are the peculiarities of communications here that, except for the inhabitants of southern Sakhalin and the Kuriles, everyone else has found it far more difficult to receive broadcasts from their own oblast than news of events in Africa or Antarctica. Innovators from the radio and television center have helped to rectify the situation. P.V. Akhmanayev, deputy chief of the Oblast Communications Administration, has reported that a creative group of specialists organized a separate channel to supply signals to the "Orbita" station. It made the necessary changes to the equipment. Under the new management conditions these additional services also promise considerable benefits for the communications workers themselves.

/12858

CSO: 5500/1028

## BRIEFS

SYRIA-USSR BROADCASTING PROTOCOL--(Hudar ay-Shaar), general director of broadcasting and television of the Syrian Arab Republic, is visiting our country. During the visit a working protocol was signed on cooperation in the sphere of television and radio broadcasting between Syria's television and radio organization and the USSR State Committee for Television and Radio Broadcasting for 1987-88. [From the "Novosti" newscast] [Excerpt] [Moscow Television Service in Russian 1635 GMT 24 Mar 87 LD] /12858

FINNISH MEDIA COOPERATION--A working protocol on cooperation between the USSR State Committee for Television and Radio Broadcasting and the Finnish Television company Yleisradio for the year 1987 was signed in Moscow today. It provides for the further development of exchanges of television and radio materials on the life of peoples of the USSR and Finland, and the rendering of mutual assistance to television journalists and camera groups in preparing programs on major events in the two countries. Much space is taken up by materials devoted to the 70th Great October Socialist Revolution anniversary and the 70th anniversary of the proclamation of Finland's independence. The document was signed by Comrade Aksenov, chairman of USSR Gostelradio; and Kiuru [as heard], general director of Yleisradio. [Text] [Moscow Domestic Service in Russian 1900 GMT 24 Mar 87 LD] /12858

TASS, BRAZIL MEDIA COOPERATION--Rio De Janeiro, 4 April (TASS)--The signing of an agreement on cooperation between TASS and JORNAL DO BRASIL, one of Brazil's leading newspapers, took place in Rio de Janeiro on Thursday. Under this agreement TASS will make available to this Brazilian paper its information about events taking place in the USSR and throughout the world. Brazil's mass media are showing an interest in obtaining TASS reports. Of late agreements on cooperation were signed with the O GLOBO and CORREIO BRASILIENSE newspapers, and also with Brazil's EBN news agency. [Text] [Moscow TASS International Service in Russian 0621 GMT 4 Apr 87 LD] /12858

CSO: 5500/1028

## MOBILE TELEPHONES TO USE COMMON SYSTEM BY 1995

Stockholm DAGENS NYHETER in Swedish 25 Feb 87 p 6

[Article by Dag Bjerke]

[Text] The more than 100,000 mobile telephones that can be found in Swedish cars today may become worthless around 1995. At that time, an entirely new common system for all of Western Europe is expected to be ready.

Representatives for 15 European countries met last week in Madeira to try to agree on how such a system should look. They did not succeed.

Thus far, the countries agree that it is going to be a so-called digital system, i.e. the various speech tones are transformed into a rapid stream of computer technology's only two signs, zeros and ones, before they are transmitted as radiowaves from the automobile antennas.

But the countries cannot agree on whether this rapid stream should become a few broad rivers or a number of small brooks:

France and West Germany stick to the so-called broad-band technology, while the other 13 countries, Sweden included, want narrow-band technology.

One example of a fairly typical narrow-band system is Ericsson's DMS-90, that of a broad-band system is the French-German CD-900.

### "Decisison Before Year's End"

Thomas Haug, a civil engineer at the Swedish National Telecommunications Administration and chairman of the West European Group for Mobile Telephone Systems, GSM, believes that the fifteen countries will be able to agree before the end of the year.

"The way the votes are distributed now, it seems that France and West Germany will have to come over to the other side, if there is going to be a functioning international mobile telephone network," says Thomas Haug.

With such a network, it would be possible for a Dutchman to call from his car in Sweden to another car in Italy.

Behind that example can be discerned an administrative problem, which is still considered to be of minor importance: a working group within GSM has received the following question to consider: how do you debit the call?

It is the computers and transmitters in Sweden and Italy respectively that have done the main job, but the bill has to find the Netherlands and the payment then has to be apportioned between the countries involved in the call.

#### Test Between Eight Systems

Before a previous GSM-meeting in The Hague, a test was arranged between eight different technical systems, concerning the transmission of digital signals via radio from a car to a receiving station.

Among the eight "competitors" were such giants as Bosch, Ericsson, Mobira, Philips and Siemens.

However, a typical outsider won this heat: ELAB, a small experimental laboratory at the University of Trondheim.

"Others that placed well are said to be a French-German broad-band (!) system, along with a French narrow-band system and the Swedish National Telecommunications Administration's Max 2-system.

"That does not mean that GSM leans towards any of these particular systems," says Thomas Haug.

A joint Western European mobile telephone network would show reasonably quickly and mercilessly what the current mobile telephone networks really are: provisional arrangements and prototypes on the road to what is to come. Among them the Nordic NMT is by far the largest, relatively speaking.

As previously in the Swedish mobile telephone history, there will not be any abrupt deaths: "The current systems will remain for a number of years even after the introduction of an international digital system," says Thomas Haug.

"Furthermore, the time for the introduction of a new system, 1995, agrees fairly well with today's estimated technical lifetime, 7-8 years, of the mobile telephones."

12339  
CSO:5500/2470

CONTINUED CONTROVERSY OVER 'HYBRID NET' CABLE PLAN

Business Sees As Unnecessary

Copenhagen BØRSENS NYHEDSMAGASIN in Danish 13 Feb 87 pp 28-29

[Article by Niels Torben Volqvartz]

[Text] The business sector has no need whatsoever for the hybrid net, though this was one of the main arguments for the decision by the Folketing to give the go-ahead for the hybrid net. A number of the major data customers of the telecommunications network tell BØRSENS NYHEDSMAGASIN unanimously that they anticipate no problems of capacity in the existing telecommunications network in the foreseeable future.

The hybrid net is now defined as a network for the distribution of TV and radio programs from satellites and transmitters. It does not provide the possibility of a two-way picture transmission. A need that business can only discern in the distant future.

Broadband connections are now only arranged as electric wire cables and are the backbone of the entire Danish telecommunications network. The branching to the individual users still takes place via traditional cables.

Ample Capacity

The major users of the telecommunications network for data communications--in industry, banking, and the service sector--are well satisfied with the service they get today and do not fear problems of capacity within the next 5 to 10 years. The so-called digitization and the new technical facilities create ample capacity without any hastened expansion of the network of electric wire cables.

"There will be no crowding of the telecommunications network on account of our needs," says Jørn Peterseen, SDC, the Data Center of the Savings Banks, which undoubtedly is the major consumer.

Flemming Jørgensen, sales manager of ØK Data: "We shall accept the broadband network in the long run, but the natural replacement of the network goes quite quickly as it is."

Danfoss's chief of EDP technology, Christian Koch, does not either see a need for any intensified expansion of the broadband network now or in the near future.

"Two years ago, I would have hesitated to make such a definite statement, but due to the development of personal computers, more tasks are handled at a lower cost in a decentralized way," says Christian Koch.

According to Hans Erik Hansen, vice president of the Federation of Danish Industries, the study undertaken by the Federation of Danish Industries of the need for data transmission does not indicate any problems of capacity.

Researchers also reject the calculations on the part of the telecommunications companies of the need for the transfer of such large quantities of data and video pictures as to require large-scale broadband connections for the time being.

"The telephone companies are unable to render probable their prognoses, on the basis of which the hybrid net decision was made. Not a single hospital expects to have the need for a broadband connection by 1990. In the prognosis of broadband customers, all hospitals are expected to be potential customers by 1990," says Jørgen Andreasen, M. Techn. Soc., the Technical University of Denmark. He is a researcher working on the TELUS project, which is a research project evaluating developments within the area of telecommunications.

"The long-term planning of the telephone companies is inadequate. They ought to be able to present supporting figures on a 10-year view. If they believed in their own estimates of 1983, they would be able to offer financing of larger sections of the hybrid net and to introduce lighting cables at a faster rate," Jørgen Andreasen goes on to say.

#### Jutland Vision Year 2000

Preben Kjær Petersen, division chief of the Jutland Telephone Company, declines to come up with any new figures and estimates. He now defines the hybrid net as a net exclusively for the distribution of radio and TV signals. Contrary to previously, the needs of the business sector and the hybrid net will have to be dealt with separately, although the signals of the broadband connections on the main road go through the same lighting cables.

"The lighting cables will come, irrespective of any resistance. They are cheapest," Preben Kjær Petersen says. He does not want to discuss technology. "Our major blunder is that we have marketed a productive apparatus instead of the product. The various enterprises do not know what their communications needs will be by the year 2000," Preben Kjær Petersen says.

The Jutland vision year 200 looks briefly as follows:

ApS Jern is a subcontractor in the iron industry with nine employees and a proprietor by the name of Henrik Jensen. Its speciality is the milling of metal parts.

The visitor enters a large, bright room with green plants. The division between the administration and the workshop has been done away with. In a glass cage in the middle of the room one discerns an engineering section and the subdued noise of machinery.

"The switchboard" is the actual entrance to the enterprise, because all contact with the outside world takes place electronically.

A regular customer calls, and the data of the customer appear on the data screen. A green light in the lower part of the screen shows that everything is in order and that the last order has been paid for. A picture of a previously supplied product appears on the screens of both the customer and the supplier.

Several entries are made: data for time of delivery, number, production data, materials, tools. The needed materials are not in stock, the computer says, because of the just-in-time production with minimum stock. Another push of the button, and the operator is in contact with a technological, scientific data base to find out if other metal alloys are equally good and inexpensive.

When arriving at work, the person in charge of the stockroom lights up the screen and takes a look at the production program of the day. When the materials have been fetched for "the production glasshouse," the operator takes over. After a couple of entries, the production process is started. A robot arm piles up the finished parts on a small pallet.

When getting a particularly difficult task, Jensen sometimes gets outside assistance. In this case, he has chosen a design firm on Samsø. Jensen enters the combined telephone, data and video terminal.

The firm on Samsø would like to participate and contacts electronically an iron foundry, etc. The entire process takes place electronically, and an impressive three-dimensional drawing on the screen changes into a complicated list of data which controls the production and activates robots and machine tools.

"This example is based on a telecommunications network which does not yet cover the entire country. But the current digitization and the expansion involving lighting cables thus constitute a development of the new telematics infrastructure. I am convinced that the majority of our many small and medium-sized enterprises will become completely integrated in the computer network by the year 2000, provided we plan accordingly," says Preben Kjær Petersen.

The Jutland Telephone Company no longer wants to do its marketing on the basis of the extraordinary technical capabilities of lighting cables and modern electronics. The possibilities of application will now have to be highlighted to the Danish business sector, so that it will be able to discern its needs. The concepts of TV transmission and the data transmission of the business sector will have to be separated, even if, to a large extent, they pass through the same cables.

## What Kind of Network

**Broadband:** Broadband is a concept without a definite definition but is usually interpreted as wires capable of carrying two-way communications of live pictures. The breadth is not physical breadth but the capacity of conveying information. Telecommunications technicians normally define broadband capacity as 2 Megabits, i.e. 2 million units per second.

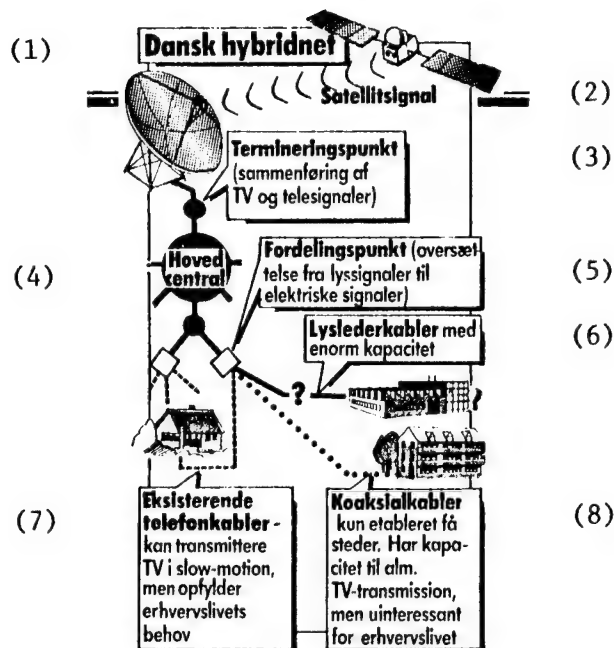
It does not seem as if there will be a need for too many of the services requiring broadband communication in the next decade. In addition to TV, broadband communication provides possibilities of video meetings, color telefax, video telephones.

**Hybrid Net:** The hybrid net is a combination based on a main net of broadband cables (usually lighting cables of glass fiber wires), while the local network consists of old-fashioned copper cables. The impression had been that connection to the hybrid net would be necessary to obtain advanced data communications services. That is not the case.

**Digitization:** Digitization is the conversion, for example, of a telephone conversation into a dual number system, 1 and 0. In a lighting cable, the signals are converted into light flashes or electric and non-electric tension in a traditional cable. Most of us today talk to another via 1's and 0's when picking up the telephone.

Digitization of telephone and data transmission increases the capacity of the existing telecommunications network and will eliminate the need for new cables in many areas.





Key:

- (1) Danish hybrid net
- (2) Satellite signal
- (3) Terminal point (combination of TV and telesignals)
- (4) Main terminal
- (5) Distribution point (conversion from light signals into electric signals)
- (6) Lighting cables of huge capacity
- (7) Existing telephone cables--capable of transmission of TV in slow motion but meets needs of business sector
- (8) Coaxial cables introduced in few areas. Has the capacity for general TV transmission but is also of interest to business sector

### 81 Million Kroner Invested

Copenhagen BERLINGSKE TIDENDE in Danish 7 Dec 86 p 8

[Text] The local telephone companies and the Postal and Telegraph Services have so far invested a total of 81 million kroner in the hybrid net.

This information was provided by Minister for Transportation Frode Nør Christensen (Center Democrats) in a reply to Kristen Poulsgaard (Progressive Party). The minister goes on to say that the development of the hybrid net is controlled by the demand, as a result of which a deficit will only occur when the capital investments are too large in relation to the utilization of the TV programs.

7262

CSO: 5500/2476

FEDERAL REPUBLIC OF GERMANY

FRG FIBER OPTICS DEMONSTRATION TESTS HDTV PRINCIPLES

Duesseldorf VDI-NACHRICHTEN in German 2 Jan 87 p 11

[Article by Claus Reuber: "The Same Picture Quality on the Home Television As at the Cinema"; first paragraph is VDI-NACHRICHTEN introduction]

[Excerpts] Berlin, 2 Jan (VDI-N)--A demonstration was made early in December in Berlin of how future high-definition television may look with a fiber optic transmission from Sender Freies Berlin (SFB) [West Berlin television station] to the Heinrich Hertz Institute (HHI). Upon the completion of the development work, the viewer should experience a television image with about double the lines and eight times as many pixels as at present. The quality should then be equivalent to that of a movie film and offer the eye large format flicker-free and line-free TV images.

On 11 December, 50 viewers saw the German premiere of an HDTV [High Definition Television] image that was produced by a video projector and delivered via signals from a fiber optics transmission cable.

The demonstrated process increases the number of scanning lines from today's 635 to 1129, the number of pixels grows by about a factor of eight to 1.6 million, and the image production rate increases from 50 to 60 per second, freeing the image from flickering. During the Berlin demonstration, the images projected had a diagonal size of 3.5 m while the quality was roughly equal to that of a projected transparency.

Data Transmission Rate Until Now Has Been Far Too High

The test cable for the digital transmission of HDTV signals used a monomode optic fiber and a data transmission rate of 864 Mbit/sec. The cable is part of an experimental system that so far is the only one of its kind in Europe. It is being developed by the HHI with funds from the Federal Ministry for Research and Technology (BMFT). The further development of transmission technology and of large screen image reproduction are among its objectives. For example, work is being done on reducing the data to one-third of the capacity currently used. Furthermore, a wealth of experience on the possibilities of use of the new HDTV medium in program production can be obtained through continuous HDTV presentations in the form of a small electronic cinema, in cooperation with SFB.

Experts from the HHI and the BMFT said that equipment for use in the home will be on the market in 10 to 15 years at the earliest. At the moment, they said, it is a matter of first obtaining technical communication [standards] in studio technology. According to an HHI representative, it is hoped that technical standards will be developed in 3 years, followed by the production of equipment for the home.

HHI has been working on HDTV problems since 1981. A research and development contract has been awarded for the development of a suitable camera, while the problems of transmission and reproduction are being confronted in-house in Berlin. In order to successfully introduce HDTV, the availability of high resolution large-scale display units will be of crucial importance. The desirable image field dimensions with a diagonal of between 2 and 2.5 m will be possible in the near future only with television projection, HHI confirms.

While for the premiere a Sony projector was used with three projection tubes for the basic colors--red, green, and blue--the HHI specialists are working on developing a projector using the principle of light valves. In this process, which was proposed decades ago, a control film, which can be thought of as an electronically generated transparency in the rays' path, modulates the light of a separate light source. In this way, light flow and resolution can be increased independently of each other, which presents problems in electron-ray image tubes.

The work undertaken by the HHI in Berlin is a part of "Measure No 16 of the Framework Plan of the Federal Government for the Promotion of the Development of Microelectronics, Information Technology, and Communications Technology," for which a total of DM60 million is available for 1984 to 1988. About one-third of this sum goes to Berlin.

#### The Projector Functions with Light Valves

On the occasion of the HHI premiere, Dr Joerg Sander of the BMFT compared the technological breakthrough expected in television in the 1990's to the change-over from black and white technology to color television in the 1950's. However, the introduction of high definition television will have effects that will go beyond the field of television itself, changing, on the one hand, film production and, on the other, the balance between cinema and television since the same image quality offered in the cinema will be available in the home.

As important reasons for the BMFT promotion, Dr Sander cited the situation in the entertainment electronics industry in Europe, the development of the fiber optics broadband network, and the pacesetting role that HDTV plays in electronics in general. He recalled the reduction of the number of people employed in the European entertainment electronics industry in recent years and their concentration in two sectors. Today's stagnating television set market can only be reinvigorated by a new television system. Sander also referred to the EUREKA project in which Bosch, Philips, Thomson, and Thorn-EMI are working on the development of new system standards.

The preliminary work of Japan's public broadcasting company, NHK, began in 1970 and has led to a quite well developed system with 1,125 lines per image, a half-frame sequence frequency of 60 Hz, and 2:1 line interlacing. For the remaining requirements, the technical characteristics of today's television were largely maintained, to the extent that this innovation appears rather conventional now in the middle of the 1980's. Still, Japan's leading position in establishing standards has enjoyed considerable influence in the formulation of a studio standard.

Nobody doubts that in the future high definition television production, transmission, and image reproduction standards can and will be different from one another. After all, the unified standards for each step from production to reproduction in traditional television's analog technology is already being abandoned gradually in the changeover to digital technology. The purely electronic problems that are inevitable in the process of changing standards may be solved relatively easily with microelectronics components. For example, the 216 Mbit/sec of the digital television studio standard recommended by the CCIR [International Radio Consultative Committee] does not fit any of the hierarchic levels of international broadband connections. That is why work is already being done to reduce bit rates for transmission standards to about 140 Mbit/sec or 34 Mbit/sec.

As is known, the decision on the HDTV production standard of the future was postponed for 2 years in the summer of 1986. The Japanese proposal for 1,125 lines and 60 half-frames per second is countered by the European proposal for 1,249 lines and 50 Hz. Yet is hardly likely that the 60-Hz countries will abandon their 60-Hz standard, which is superior in terms of the absence of flickering. The only thing remaining is the understandable desire to establish a "common superstandard" that would support international program exchanges and would be suitable for an easy changeover to various transmission and reproduction standards.

8702/9423  
CSO: 3698/M151

## PAPER URGES ADDITIONAL STUDY BEFORE INAUGURATING TELE-X

Helsinki HELSINGIN SANOMAT in Finnish 22 Feb 87 p 2

[Editorial: "Tele-X Is Not Yet Ripe"]

[Text] The launching of Tele-X with the French Ariane rocket has been postponed for a year and a half. Thus the idea of a Nordic satellite conceived in the early 1970's will not be practically implemented until early in 1990. The delay offers us a good opportunity to once again consider what we actually want from a Nordic satellite. The decisions on the satellite were made in their time on the basis of ideas about communications and cultural policy as well as technical concepts. But will these arguments still be valid in the communications environment of the 1990's? If not, there is still time to change the decisions.

Up to now it has been agreed that Tele-X will be in experimental use by data communications services and national broadcasting corporations for 3 years following its launching. What will happen after the test period has not so far been decided. It is estimated that the satellite will have a life of 7 years. The other Nordic countries with the exception of Denmark are participating in the venture.

Tele-X is a compromise in which solid technological objectives as well as cultural and communications policy ambitions are intertwined. Its importance in terms of industrial policy is primary. TV operations are included so that more justifications and paying customers may thus be obtained for the satellite.

There is no particular doubt about the industrial policy grounds for Tele-X. On the other hand, the high cost of the satellite and its use for TV transmission have given rise to criticism, since the same services will offer can be bought at competitive prices from the transmission satellites. The advantage of the transmission satellites is that they do not commit us to permanent solutions as our own satellite would.

This is really at the heart of Tele-X's current problems. From the standpoint of extending collaboration on the satellite, it is particularly important that the right decisions be made during the test period. The test cannot be cancelled. If it is unsuccessful, collaboration will end right there. It is

therefore important for the decision-makers to consider the fact that Tele-X risks turning into a big flop with the present model.

Tele-X is considered to be important because of data communications and cultural policy. It is also regarded as increasing solidarity among the Nordic countries. It is also felt to be an effective counterfoil to international channels in space. But will these arguments still be valid in the 1990's when Tele-X will just be starting to go into operations?

The programs transmitted via Tele-X would be competing with national TV channel, cable companies, channels in space, local TV, video recorders and perhaps also commercial TV for the patronage of viewers in other Nordic countries than Finland as well. There are already video recorders in a half a million homes in Finland and Sweden and their number is constantly growing at a furious rate. It is questionable whether even quality Nordic entertainment and current events programs would capture large enough numbers of viewers in this kind of competition for it to pay to sink hundreds of millions into the satellite and its programs while investment in the production of national programs is still badly needed under the pressure of the competition.

According to a study conducted in Sweden, Tele-X would succeed in capturing only from 0 to 5 percent of TV viewing time. It would lose out to the national channels in popularity, but--surprisingly indeed--clearly also to the channels in space and to cable TV. According to the latest information, viewers would scarcely nowadays seek out as their first choice on TV those programs which Tele-X would be offering.

Nor would Tele-X be viewed as such on ordinary TV sets. It would be possible to view it on cable TV if the cable can accommodate it. Households without cable TV would have to buy additional equipment which would cost from 2,000 to 5,000 markkas. How many of Northern Europe's 22 million viewers would be willing to spend that much for programs presented in the language of another country?

The fact that it is even now possible to view neighboring countries' TV programs across the border in many places in Northern Europe also lowers interest in Tele-X. Communication links between countries and Nordprog [Nordic Programs] may also prove to be more practical alternatives to a satellite. Furthermore, Pohjoisvisio [Northern Vision/Viewing] is even now garnering the pearls produced by the TV companies for viewing. So Tele-X will be behind the times, at least in terms of the form in which it is at present being developed--if not otherwise as well.

The directors of the Nordic countries' national broadcasting companies will be proposing in a report soon to be made public that Tele-X be enlarged to include four channels. This could result in additional funding of nearly 100 million markkas. The benefit of this would, however, be a considerable saving on other expenses. Thus the TV programs of the four Nordic countries could be viewed directly via Tele-X. At the same time the situation would come full circle: Tele-X would be reminiscent of the original idea behind Nordsat [Nordic Satellite], all of Northern Europe at one's fingertips.

They are also at present considering the idea of a commercial superchannel that would operate through Tele-X. Its ownership base would be extended beyond the radio broadcasting companies to newspaper publishing houses and film producing companies, among others. In addition to the program policy, the funding would also be new in character: The Nordic superchannel would not depend on national budgets or license fees. Support for a special fund for the production of Tele-X programs based on the present model will again be proposed at the Helsinki conference of the Nordic Council.

As these proposals also reveal, Tele-X is not ripe for implementation. The notion of how it is to be operated ought to be seriously considered once again. In particular, a use ought to be found for its TV channels in the Nordic countries that will be able to withstand the competition in the 1990's and into the next millenium as well.

11,466

CSO: 5500/2461



SEPT CONTRIBUTIONS TO R&D, INTERNATIONAL STANDARDS

Issy-les-Moulineaux L'ECHO DES RECHERCHES in French 3d quarter 86 p 45

[Article by Paul Deligne: "SEPT and Its Tasks"]

[Text] General information about SEPT

The Post and Telecommunications Joint Studies Service (SEPT) was created in September 1983 and located in Caen. It is a joint research center of the General Postal Directorate (DGP) and the General Telecommunications Directorate (DGT).

Its research program and budget are set by a board consisting of three members of the DGT and three of the DGP, presided over alternately by a representative of each of the directorates. To ensure its smooth operation, SEPT is administratively attached to the National Center for Telecommunications Studies [CNET], which also manages six other centers.

Having grown rapidly, SEPT now has some 150 employees (half of whom are professionals and engineers). It will move to its permanent quarters at Caen Venoix in the fall of 1987.

SEPT and its Areas of Research

SEPT will deal with electronic payment, electronic mail, and, in general, any points of common interest between the postal and telecommunications services. In these two areas SEPT's role is to draw up technical specifications for equipment and new systems under development, to design models for technical feasibility studies, or to conduct on-site service testing. The structure of some research teams for open-ended projects favors the use of new technologies in future developments.

SEPT and International Relations

SEPT is active in three international areas: international standardization, European research programs, and intern exchanges.

In the framework of meetings on international standardization held by organizations such as the European Conference of Postal and Telecommunications

Offices (CEPT) or the Consultative Committee of International Telephone and Telegraph (CCITT), SEPT researchers aid in drawing up standards for new services and for their coordination on an international level.

SEPT is currently participating with leading French electronics and telecommunications manufacturers in the major European research programs for data processing and data communications (ESPRIT, RACE, etc.).

SEPT supports international cooperation by accepting foreign interns, students, and researchers with a special interest in the technical or economic aspects of SEPT studies, and especially in the French lead in some of these fields.

#### Electronic Payment and Smart Cards

Studies on electronic payment carried out by the "Electronic Payment and Smart Card (PEM)" division focus on three areas:

--Short-term studies tied to the widespread distribution of chip cards. They include the development of terminal testing tools, help in developing smart card services to be offered by the post office, and assisting the DGT in acquiring know-how for its "publiphone" cards.

--Studies on new chip-card-based services aimed at creating multiservice systems with, in particular, a "checkbook" function. SEPT provides technical assistance to government bodies (the Post, Telegraph, and Telephone (PTT), among others) and to banking institutions wishing to use chip cards.

--Long-term studies on smart card applications of the future. These include networks (smart card or secured networks), ID methods (signatures, fingerprints), chip cards of the future, etc. The goal is to maintain France's lead over foreign competitors in the smart card field.

#### Electronic Mail

SEPT has the task of developing electronic mail services to meet the needs of business and the public sector.

It is currently conducting original work in the field of electronic bulletin boards where it is responsible for standardization and protocol testing both nationally and internationally.

SEPT provides the technological know-how needed for testing the postal teleprinting service proposed by the post office for electronic mail transmission; it is developing testing tools for controlling protocols used by public bulletin board services. Progress is being made in the field of graphic databases which communicate in fax mode and their potential applications in the public Postclair telefax service. SEPT is working to provide the studies and know-how vital to development of the telefax and teletex services.

In the field of business communications, the service specializes in technologies for office automation available on the market and their use in the postal and telecommunications services. It also focuses on the development of corporate bulletin boards and new man-machine interfaces.

The "Electronic Mail Services (SCE)" division is taking on the telefax, teletex, and document structure studies previously carried out by the CCETT [Common Center for Television and Telecommunications Studies] in Rennes. When this transfer is complete in June 1987, SEPT will conduct studies for the written communications services. It will have to both integrate these services into the future ISDN [Integrated Services Digital Network] and participate in setting up value-added networks.

25054/12951

CSO: 5500/A017

# CSELT AIMS AT 'FOURTH WINDOW' FIBER OPTICS SYSTEM

Milan BUSINESS in Italian No 3, Mar 87 pp 73-77

[Article by Riccardo Romani: "1,000 Messages on Each Fiber;" first paragraph is BUSINESS introduction]

[Excerpts] Italy too has opted for a cable telephone network. But this is just the beginning; there is no limit to the possible laser and optical cable applications which in just a few years will be introduced into every home, revolutionizing the worldwide data transmission system. The estimated investments for this massive transformation are enormous.

## Research Objectives

The progress of telecommunications in fiber optics has not stopped with the results achieved by the first long-distance networks currently being set up.

In Italy, research activity in this sector is mainly concentrated at the CSELT center [Research Center and Laboratories for Telecommunications] of the STET group in Turin. These research activities are aimed at further reducing long distance signal attenuation, and perfecting new types of narrow band lasers, that is, lasers with such a high degree of monochromatic purity that they can be used as effective microwave sources. This would mean that, for the same level of investment, the carriers on each fiber could be increased by a factor of 100, or that truly logical circuits could be used, thus making it possible to receive signals from different carriers through our heterodyne radio system.

But the real goal, explains Basilio Catania, general manager of CSELT and an international expert in the field, is the so-called fourth window, that is, the possibility of transmitting on a 2.7  $\mu$ m wavelength. Minimum attenuation already has been achieved in the third window, with a much lower level than that achieved in the first and second windows. Major results for the success of the research in progress have been achieved with a new type of fluorozirconium glass whose transparency characteristics are maintained up to a wavelength of 8  $\mu$ m. The basis for achieving even lower attenuation [values] therefore exists. At the same time, the new types of lasers based on cadmium tellurite and mercury also seem promising.

The latest research targets for providing our entire planet with a low-cost and easy-to-use cable system lie in the totally pure monochromatic lasers and fiber optics with theoretical attenuation [value] of 0.001 decibels per kilometer. In fact, a fiber with the above heat attenuation [value] would be able to transmit signals for 50,000 kilometers without a repeater. The possibility of multiplying the number of carriers by a factor of 100 would make it possible to transmit up to 100 television channels on one standard optical cable at any one time.

#### The Situation Today and Future Developments

But regardless of research goals today, this is not the reason to stop or slow up the development plans of fiber optic telecommunications taking place in various countries. In the U.S. more than 2 million kilometers of fiber optic cable already connect, over long distances, major centers on the Atlantic coast along the Boston - New York - Philadelphia - Baltimore - Washington - Mosely (sic) axis and, in California the terminals of Sacramento - Los Angeles, San Diego and San Francisco. In 2 years, the TAT-8, the first transatlantic optical cable between the United States and Europe, will be laid. The TAT-8 has only six fibers and will double the present traffic capacity, estimated at approximately 20 million circuits. It is a useful alternative from the viewpoint of security since, if a fault occurred in the geosynchronous satellite or if it were destroyed or damaged, this would immediately sever telephone communication lines between the two continents. After the recently established London-Birmingham connection, Great Britain is speeding up the installation of cables on the long distance network since its existing copper coaxial network is now saturated and obsolete. France and the FRG are not as advanced since they both recently upgraded their conventional networks which will continue to function for a long time before they need to be replaced.

In the Mediterranean, following implementation of the fiber cable network and proposal for submerged optic cables to link Sicily and Sardinia, Italy already is conducting a study for an integrated international network of optic cable communications which may be used in the future by the littoral countries. The network center will be the Palermo - Catania link [Sicily], which is already part of the national long-distance network.

Another prospect on the horizon which already is possible in technological terms will not be financially feasible for another generation. This concerns the large-scale introduction of fiber optics in the final phase of cable telecommunications, that is, the distribution network.

This is the business of the future, because it will affect over half a billion users, that is, the entire world telephone network (which in 30 years could very well double). The implementation of a two-way optic cable in the place of the present telephone duplex cable would in practice mean offering the user the complete service that the informatics-oriented society of the future will

demand: total availability in the home of all types of phone communications and direct access in real time to all possible kinds of information, such as databases, telematic services, and TV.

The rate of growth, and the transmission and traffic volume capacity of submerged telecommunications mean that they will be fully competitive with the space telecommunications offered by artificial satellites. This is thanks to the wave frequency which is ten thousand times greater than radio wavelengths and which already is providing millions of people with the possibility of communicating with each other on a ray of light.

8618

CSO: 5500/M202

PROBLEMS ON WAY TO BROADBAND, GLASS FIBER IBCN NETWORK

Cable TV, PTT Differ

Rotterdam NRC HANDELSBLAD in Dutch 26 Feb 87 p 7

[Article by NRC HANDELSBLAD staffer F. Kuitenbrouwer: "Cable Operators and PTT Move Together Toward Glass Fiber Network: Two Worlds Collide"]

[Text] The Hague, 26 Feb--How will the Netherlands--one of the most densely cabled countries in the world--pilot its large investment in the new medium safely into the 21st century? This was the main question asked yesterday at a conference organized by the INTERCAI advisory group. A range of interested parties presented their first, largely critical, responses to the report presented to the government by the Zegveld Commission.

The commission suggests that the (local) cable networks and the PTT telecommunications infrastructure be combined into a single, modern glass fiber network managed by the PTT, which would become independent.

In short, by the beginning of the next century the commission would like to see all telecommunications enter a customer's house via a single plug: telephone, television, and anything else. Glass fiber cable differs from current technology in that it carries light signals rather than electrical impulses. However, the new network owes its importance primarily to the smart equipment and services it makes possible. What this actually will lead to is largely a matter for futurologists. Because it is broadband, however, picture telephones will certainly be possible, and in the quiet hours of the night the videorecorder will stock up from a central film library. Further applications that can already be predicted include telestores and alarms for the old (or electronic babysitting), as well as electronic mail at home and color facsimile service. And in the 21st century the gas company will not need to come to your house to read your meter.

Yesterday few questioned the final goal of an integrated broadband communications network (IBCN)--the first steps toward which are already being taken at the European level. It is how to get there that causes the problems. There were reservations on all sides: from the cable operators, the PTT, the Consumers Union, and the media policymakers from the Ministry of Welfare, Health, and Culture.

## Patchwork Quilt

The proposed integration thus brings two worlds into collision. The PTT, with its three main networks (telephone, data, and telex), is uniform in structure and practically omnipresent; the telephone has a 91 percent level of penetration. Cable is a patchwork quilt, and one "that is 30 percent holes" at that.

The sums involved in integration are not insubstantial. Roughly 2.4 billion guilders of cable technology is buried in Netherlands soil and the PTT has invested 8 billion in its telephone network alone. The Zegveld Commission calculated that around the year 2000 constructing a glass fiber network becomes cheaper than constructing two separate networks for cable and telecommunications. That may well be true, said Consumers Union Director D. M. Westendorp, but of course the real question is, what will it cost to achieve an advanced telecommunications network in the 1990's and what does that mean to the network's users?

According to the Zegveld Commission, about 700 million guilders is called for in the period 1988-92 to help integration along--above and beyond regular investments of 800 million by cable operators. The cable infrastructure needs to be upgraded by installing smart switching equipment at distribution points and laying glass fiber links between networks. The government should provide half of this investment in the form of incentive premiums. The other half should come from the PTT and operators, if possible with help from the suppliers of new cable services and other investors. The commission expects so many new services to flourish that 10-15 percent profits are feasible.

So far neither the cable operators nor the PTT seems to be impressed. PTT Director General Eng C. Wit spoke openly of his "astonishment." He felt that those costly switches only threatened to delay the introduction of an IBCN because "internationally you don't find many networks with switches." Furthermore, he doubted that government support could be obtained in the order of magnitude called for by the commission.

The first reaction of Eng G. B. Deelman, Deputy Chairman of the Association of Cable Operators (VECAI), was that "we don't see what's new about those services, nor do we see that attractive return on investment." He pointed out that with one exception it is possible to introduce those new services (a subject that many cable conferences have already dealt with) using the current cable networks if the telephone network is used for return traffic. Wit affirmed that this combination can meet "current needs."

Deelman judged the proposed investments far too risky, not least for the consumer, a point on which Westendorp of the Consumers Union agreed with him. "What drives the market, technology or the consumer?" Deelman asked. And why not carry out a careful pilot study first (like the South Limburg two-way system that is finally due to start up soon)?



## Weak Point

Chairman Zegveld replied that the combination of telephone and cable is certainly a step in the right direction. Pilot studies also contribute and he certainly expects the government to make money available for those. Zegveld was willing to admit that "demand is the weak point."

When the PTT takes over the cable system, new problems arise. As a matter of principle the change must not lead to higher prices for the consumer; in this industry profits have long been modest. Deelman says that for the cable operator the conclusion can only be that "he disappears."

The PTT's Wit declared this too somber a view; there will be a change in function but there will always have to be somebody between the network administrator and those who supply services. However, Dr Cand K. van der Steenhoven, head of the Ministry of Welfare, Health, and Culture's Radio, Television, and Press Directorate, saw yet another complication: "The difference between administering and controlling isn't always a large one. Doesn't the owner of the railroad line want to determine which train rides his rails and which doesn't?"

Consequently he sees "a great deal of skirmishing in prospect." How will the PTT weigh its interests in cable broadcasting against its interests in the transmitters for conventional broadcasting? Van der Steenhoven did not mince words: "On the one hand we have a government that much likes to, or has to, play a regulatory role in media questions, but along with that we're also getting a semigovernment organ with a monopoly on the information infrastructure. If in addition they start working hand in glove with one another, then it seems to me that things will really be bad." Given this diagnosis, it was remarkable that Van der Steenhoven presented the Ministry of Welfare, Health, and Culture as coordinator for the integration operation.

In conclusion, conference chairman Prof J. Arnbak of Delft asked those present whether cable ought not to be treated as a public utility. At present it is far from being one, given the holes in the network. Nonetheless, according to the European Community such a public function is the sole justification for a monopoly. Under the Zegveld plan the PTT would have a monopoly but that could well be said of the current local cable operators as well, because today they have an exclusive right. For neither of these is cable an easy matter to deal with, unless a division is made between a monopolistic basic package for everybody and competitive add-on services.

## Editorial on Cable Problems

Rotterdam NRC HANDELSBLAD in Dutch 27 Feb 87 p 9

[Editorial: "Cable and Its Chains"]

[Text] Cable is well on the way to becoming a medium with a fine future behind it. Great things have been promised and for years we have been told about 1001 amazing possibilities, ranging from teleshopping and telealarms to consulting knowledge banks and attractive pay-per-view formulas. But it just

will not come about. "The screen is black [i.e. swarming] with possibilities," the previous Lubbers cabinet said and it is looking more and more as if that has to be taken literally.

The Zegveld Commission recently recommended a grandiose breakthrough to the government. Cable and PTT networks are to be combined into a single integrated broadband glass fiber network, with the year 2000 as the changeover point. It seems quite clear that this will come about in the 21st century. The direction of technological development is unmistakable, at the European level certainly. For the time being, the road to that point threatens, as the commission also honestly admits, to fizzle out into a "stalemate."

The technological insight displayed in the commission's advice is matched by an incredible naivete as regards managerial and regulatory realities. That is all the worse in that cable in the Netherlands is already heavily mortgaged. Cable television is by origin simply a stopgap measure intended to improve the unprofitable operation of radio distribution. The decision to create the current local networks under PTT supervision was marked from the very beginning by halfheartedness.

It is indicative that in 1975 for reasons of media policy the cabinet decided on a "partial method of responding to social demand." That was followed by continual regulatory pressure--if not nitpicking--on the cable operators. This is true of the PTT as well, as witness the compulsory sale of a national distribution network (which fortunately came to nothing). Nor will that organization (still government-owned as of now) have forgotten that its 1960's plan for a central antenna system had to make way for local networks.

It is easier to sketch the rosy prospects for broadband glass fiber cable at the European level than to overcome the history of tribal quarrels. It shows little sense of reality to call upon cable operators to invest heavily in their own ruin. The PTT cannot be expected--on the eve of the requirement to produce profits that its new status brings with it--to close its eyes to the fact that many new cable services compete directly with its own telephone network. And don't forget the long arm of the Ministry of Welfare, Health, and Culture, which sees "pirates" everywhere.

By itself, money is not the solution in this situation--quite apart from Minister [of Finance] Ruding. A draft set of precise rules of play for the new PTT is surely of equal importance. Certainly the same can be said about an open debate on that. It must be possible finally to determine the consumer's wishes empirically. Just free cable first from its chains.

12593

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## PROCESSING TO BE APPLIED TO ELECTRICITY DISTRIBUTION SYSTEM

Madrid MERCADO in Spanish 6 Mar 87 pp 12-13

[Text] Union Electrica Fenosa has begun to use the SIRD [Distribution Networks Computerized Information System] for control and maintenance of Madrid's low and medium voltage electricity distribution network, which has over 11,000 kilometers of cables.

This program, carried out with the collaboration of Control Data, is a first in the world. It includes complete processing of data related to the distribution network--which the system stores, processes, and retrieves. It is also designed for use in planning and working out projections for new facilities.

SIRD will help to optimize the quality of service by improving preventive maintenance and its evaluation; it will boost productivity by keeping information up to date, using fewer personnel and requiring shorter periods of time; it will help with decision-making by providing access to more reliable, consistent and orderly information. Finally, it will promote better personnel skills, by replacing the traditional management starting with one using a sophisticated information support system, in some areas.

In addition, SIRD will ensure the preservation of information on and mapping of Madrid's electrical system. This information has been accumulating in files over the years, where the records have obviously been deteriorating because of their frequent use. There was also an inevitable amount of disparity in the preparation of these records and maps.

### Mapping: the Starting Point

To determine the quality of the mapping needed, all potential users were contacted, including those in Madrid's city government. Their responses provided the following set of requirements:

- a. All maps and charts should be prepared so they can be transferred from one to another without any discontinuities or gaps.

- b. Planning and zoom functions should be included.
- c. The maps should contain all data, excluding contour lines, that are listed in the originals at the Municipal Urban Development Office. For optional use, these data should be grouped in: blocks of building fronts, surrounding areas, and internal lines of blocks, starting points of party walls, building heights and details, names of streets, house numbers, and all sort of obstacles and urban amenities (sewers, street lights, traffic lights, trees, etc).
- d. The maps should also contain a representation of substations, transformer and reflection stations, medium and low voltage networks and associated elements which can be shown graphically (junctions, shunt junction boxes, supports, etc). Wiring and lines should be represented by one line, no matter how many cables are contained in such lines; the number of these cables could be defined by a succession of single dots (junctions, beginning or ending of tube lengths, supports, etc). Each of the cables should be properly coded with its status defined by a series of short transversal lines at all significant points.
- e. A typical features of mapping called "sector" deserves special attention. It consists of a map in which the network operating from a transformer center is shown against an urban background represented in scale. To get the "sector" feature in the SIRD application, a system would have to be developed to make it possible to have a detailed electrical map and a similar positional schema shown against an urban background, using the same data base. This application provides a detailed breakdown of the network wiring, with each cable represented by an unbroken line.

The alphanumeric requisites could include either simple or complex optional handling of the following concepts in relation to all the network's features: substations, above-ground lines, cables, transformer and reflection stations, service connections, etc:

- a. type of equipment
- b. electrical loads
- c. incidences
- d. geographic position
- e. date of installation

#### Description of the System

The hardware's central unit is a CYBER 810 mainframe computer with a powerful processing capacity and a large storage capacity. It performs all interactive data entry and editing functions.

The system peripherals are listed below:

- a. Two Benson graphic plotters with pens: one a reel type, size DIN A0; the other a continuous paper type, size DIN A3. They draw maps in several colors.
- b. A Benson electrostatic graphic plotter, size DIN A3, which produces maps in just one color, but more quickly than the preceding multi-color model. It can be used as a screen copier or as a traditional printer.
- c. Two alphanumeric screens.
- d. A printer.

There are three workstations where data can be entered and revised, and which are also used for both graphic and alphanumeric editing. These workstations consist of:

- a. A Benson digitizer table, size A0, which uses specific menus for entering and changing graphic data.
- b. A Tektronix M4115B graphic screen which can show the urban and electrical maps in color.
- c. A terminal for entering or displaying alphanumeric data.

The system's software has two parts:

- a. The maintenance subsystem is designed to enter and revise graphic and alphanumeric data stored in the system. The users can access the information directly from the data base or from part of it, called the "work area," which is shown on the screen.
- b. The management subsystem complies with the requirements which the users have set in advance; it covers three major areas:
  1. Graphic editing of specific areas.
  2. Alphanumeric editing to prepare reports on the system's components.
  3. Alpha-graphic editing. This is similar to alphanumeric editing, but it also has the capability to provide simultaneous graphic display of the results.

## Operating Features and Data Entry

The SIRD system can determine exactly where connections of the electrical lines are located, the types and diameters of the cable used, as well as its position in relation to the soil and another set of parameters. Break-downs can be located on the screen and repaired with a margin of error of less than 1 meter, using the data provided. In this way, risks can be avoided and repairs can be made faster and more efficiently.

The digital mapping system is a very extensive computerized information system. It consists of a computer with large processing and storage capacities. It handles all the interactive data input and editing functions. There are two graphic pen plotters, one a reel, the other a continuous paper type, which provide color representations. An electrostatic graphic plotter draws maps in just one color, but faster than the other system. There are two alphanumeric screens, a printer, and three workstations for data input and revision, as well as interactive graphic and alphanumeric editing.

Data can be entered in two different ways:

- a. There are large amounts of urban data to meet the project's specific requirements, so they are entered by using the DIGIPLAN system. By tracing photographs of the Municipal Urban Development Office's maps, this provides rapid and reliable documentation.
- b. Data of an electrical type are entered by conventional digital methods.

## Advantages

This system optimizes service quality by improving preventive maintenance and its evaluation, by providing complete network coverage.

It increases productivity by keeping data current, using fewer people and requiring less time to do the job.

It helps in making decisions by providing more reliable, consistent, orderly, and accessible information.

It improves personnel skills, by in some areas replacing the traditional management structure with a system using information support.

7679

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SWEDEN'S ERICSSON VIES FOR ITALIAN, SPANISH MARKETS, CGCT BUY

Stockholm DAGENS NYHETER in Swedish 6 Feb 87 p 12

[Article by Bjarne Stenquist]

[Text] Ericsson is negotiating with the Spanish telecommunications firm Telefonica and the Italian state holding company Stet in the hope that they will become part owners of Ericsson. In this way, Ericsson is attempting to strengthen its position in the increasingly competitive European telecommunications market.

Ericsson board chairman Hans Werthen confirmed this information, which was first published in DAGENS INDUSTRI.

Discussions are being held with several parties in Italy. One of these is Telit, the largest Italian manufacturer of telephone exchanges, with 60 percent of the market. The state holding company Stet owns half of Telit. Stet also owns the Italian telecommunications service. Stet, in turn, is owned by Iri, one of Italy's gigantic state corporate groups, which is similar to Procordia of Sweden.

"We are discussing the possibility that Telit, Stet, and Iri could become part owners, with about 5 percent of Ericsson," Werthen said. "By letting them in as owners in the parent company, we hope to strengthen our position on the Italian market. Ericsson now has about 20 percent of the Italian telephone market. The recently formed French firm Alcatel, which purchased ITT's worldwide manufacturing system for telephone exchanges, and the American firm GTE share the rest. Alcatel is one of Ericsson's main rivals in Europe."

The Italian telecommunications service has announced that it wants to reduce the number of suppliers to three. By creating closer ties with the state interests that own both the telecommunications service and the largest domestic manufacturer of telephone exchanges, Ericsson is attempting to eliminate one of its rivals and increase its own share of the market.

In Spain, negotiations are being held with the state-owned telecommunications service Telefonica, which is organized as a corporation. These negotiations involve a 5 to 10 percent share in Ericsson.

Together with Telefonica, Ericsson owns Intelsia, a company that produces AXE exchanges. In this way, Ericsson holds 25 percent of the Spanish telephone market. The remaining 75 percent is controlled by Standard Electrica, which is part of Alcatel.

Here, too, it is Ericsson's goal to expand at Alcatel's expense through closer ties with Telefonica. Negotiations are also being held for the purpose of buying out Intelsia from Telefonica. Payment for half of Intelsia could occur in the form of a new issue of shares in Ericsson.

Ericsson's negotiations in Italy and Spain must be seen on the background of the political horse trading that is being conducted on the European telephone market.

In practice, the two largest markets, France and Germany, are closed to Ericsson. In Germany, Siemens holds a monopoly through its close ties with the German telecommunications service. The French market is dominated by state-owned Alcatel, which holds 85 percent.

Ericsson is attempting to claim part of the remainder by purchasing the manufacturing firm CGCT. It is competing with Siemens and the American firm AT&T, however. The American authorities have threatened to retaliate against both Alcatel and Siemens in the United States if the Americans are not allowed into the European market. It now appears that Ericsson has little hope in this battle.

#### Foothold

Ericsson now has a foothold in the Nordic countries, Great Britain, the Netherlands, and Italy/Spain. In Southern Europe, Ericsson is now attempting to use the coattails of Electrolux and other Swedish companies to strengthen its position.

By allowing state-dominated telecommunications companies to become part owners, Ericsson also hopes to share the more and more burdensome cost of developing new telephone exchanges. In this area, it faces crushing competition from AT&T and Siemens, with their enormous financial resources.

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CSO: 5500/2464



SWEDEN

Briefs

ERICSSON'S AXE SALES REPORTED--Bjorn Svedberg, managing director of Ericsson, told a conference in the United States last Wednesday that over three million AXE-lines were installed all over the world during 1986. That is an increase of 36 percent compared to 1985, and the total number of new AXE-stations amounted to 289. The largest part of the installed lines are digital AXE-stations for local telephone traffic. At the end of December last year, the number of AXE-stations installed all over the world was over 1,112, and the number of AXE-lines amounted to 10.6 million. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 19 Feb 87 p 33]

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CSO:5500/2470

## TURKEY

### BRIEFS

NEW TELEPHONE NETWORKS--Prime Minister Ozal yesterday inaugurated a digital telephone exchange with a total capacity of 56,500 lines in Bostanci. Ozal pointed out that Turkey is applying the latest technology in the exchanges. "We are leaping into a new era," he said. Ozal said in his speech at the ceremony that rapid, reliable and nationwide communications services are an important means of bringing Turkey into the fellowship of advanced and modern nations. He recalled that international telephone calls could be made in Turkey only from specific cities just 3 or 4 years ago and was difficult even from Istanbul and stressed that foreign businessmen and tourists who came to Turkey had to go to other countries to make telephone calls. [Text] [Istanbul GUNAYDIN in Turkish 30 Dec 86 p 5] Communications Minister Veysel Atasoy yesterday inaugurated a digital telephone exchange in Buyukdere. He said that by the end of 1988 everyone in Istanbul who wanted a telephone would have one. Makbule Deniz, 70, of Tekirdag, spoke to the communications minister at the ceremony, asking that Post, Telephone and Telegraph buildings be built at Sarkoy or Murefte. Speaking at the ceremony, PTT General Director Emin Baser said that 1987 will be a good year for watching and listening. He said the wires in the old, defect-prone outdoor facilities would be pulled out and the new enclosed system installed in buildings. Communications Minister Veysel Atasoy said, "Istanbul's exchange capacity has gone up to 802,150 telephones with this 5.5-billion lira exchange. Our goal is to provide 400,000 Istanbul residents with telephones next year." [Text] [Istanbul MILLIYET in Turkish 1 Jan 87 p 13] 8349

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